Genesee Farmer.

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WALKS AND TALKS ON THE FARM.—NO. 3.

How much there is to be done on a farm! What a multitude of little things to be attended to! It is almost impossible not to *worry* at times when you think of the labors of the coming spring and of the hourly recurrent duties of the day: and it is worry and not work that wears on the constitution.

Order, system, energy and promptness are the great requisites to success in farming—as in any other business. I admire the man that is never in a hurry—that has learned the great art of "making haste slowly." Solomon says: "He that hasteth with his feet sinneth." But on the other hand he hates without mercy the sluggard and the lazy. Our homely Yankee adage, "Be sure your right, then go a-head," expresses the true idea. Lay your plans with thoughtful deliberation, and then execute them with energy and promptness. Think first, and work afterwards with all your might.

I know a good business man who writes down on a slate every evening the work to be done on the following day. Some such plan would be good on a farm, though I would not confine it to the immediate work to be done, but would put down every thing that I could think of that will need attending to for a month or so to come. Let us jot down a few things now, just as we can think of them:

"Clean, oil and repair harness.

"Examine plows, harrows, cultivators and other implements, and have them put in order.

"Prune apple trees.

"Send to the mill for five tuns of plaster.

"Draw bone-dust from the city.

"Have the hinge on the front gate mended.

"Get a new reach for the wagon.

"Fix up the fences.

"Draw fire-wood and saw it with the machine."

Is that all? It does not seem that it should worry a man very much!

But there is the stock to be attended to, with their daily and hourly wants. Make an estimate of how much fodder you have on hand, and be careful that you do not run short. Feed regularly, and no more than the cattle and sheep will eat up clean. John is inclined to waste the straw. I can not persuade him that it is half as valuable as most farmers regard it. The corn-stalks are nearly all used up, and I do not like the idea of feeding out any more hay than I can help. But cows at this time of year must have a little. It will not do to let them get poor.

When I told John that I had bought ten tuns of bone-dust, and that I was going to put it on the fifteen-acre lot where the corn was last year and sow it to barley, he shrugged his shoulders and remarked "You know best;" which I interpreted to mean that he thought I did not know anything. He thought leached ashes were worth more than bone-dust, superphosphate or guano, and he had the fullest confidence in barn-yard manure.

But if you can not get the ashes and barn-yard manure, there can be no harm in resorting to the manufacturers of artificial fertilizers. They will pay this year if ever. There can be little doubt but that we shall have high prices next fall, and the only reason why we have not hitherto used as much guano, superphosphate, and other artificial manures, as the English farmers, is that we did not get enough for the produce to make it pay. But we are now getting higher prices than the English farmers, and we can afford to take extra pains and incur additional expense to get an extra crop.

If you can be sure of getting $1.25 per bushel for barley, it will pay to use superphosphate and guano for this crop. From 200 to 300 pounds per acre will probably give you 10 or 15 bushels per acre extra, and your land will be in better condition for the next crop.

There are few of us who appreciate the full advantage of getting a good crop. Like the mind, land will be occupied with something. An idle brain is the Devil's workshop, and half-cultivated land is soon filled with weeds. Raise a good smothering crop of grain or peas, and you will feel the advantage of it for years. The crop itself pays a handsome profit, the land is cleaner, and the straw will

enable you to keep more stock and make more manure.

In the January number of the *Farmer* I alluded to the assertion that "every bushel of wood ashes applied to the corn crop is worth one dollar," and gave an experiment made by myself, where 400 pounds of unleached hard-wood ashes applied to an acre of corn only increased the yield *half a bushel* over the unmanured acre adjoining. Now there may be instances where ashes have greatly benefited the corn crop. I never doubted the fact. But to assert that ashes are *always* beneficial, and that they are worth a dollar a bushel as manure, is to assert what I believe is not true.

But I would not be understood as recommending farmers to sell their ashes. In most cases they are worth more as manure than the soap-makers will pay for them.

A day or two after the January number of the *Farmer* was out, an old New England friend of mine, now in his ninetieth year, remarked:

"Your paper is quite interesting this month."

Knowing that, like all other sensible men, he was quite chary of compliments, I thought there was something more to follow.

"I see," he continued, after a few minutes, "you do not think much of ashes as a manure."

"I have made several experiments with them," I remarked, "and seldom found any benefit from them."

Now if any one thinks this is a conclusive argument, he is greatly mistaken. Farmers are great sticklers for facts; but if any one, who is rather given to making experiments, mentions a fact that runs counter to their general experience, they treat it with no more respect than a regular physician would the opinion of a quack doctor.

So my worthy friend still adhered to his old opinion—and I do not blame him—that ashes were an excellent manure. He had seen them used with good results for three-quarters of a century—and is one experiment to upset the experience of a life-time?

Other gentlemen have spoken and written to me on the same subject, all asserting that ashes are an excellent manure. Mr. Bela Dunbar, of North Chili, writes that he has for many years used ashes on his corn, and always found them beneficial. He has put ashes on two rows and then skipped two, and so on alternately through the field, and always discovered a marked difference in favor of the ashed corn, both as regards color, growth and yield at harvest. He says he would not sell ashes for one dollar a bushel, as he thinks they are worth more than that to apply to the land.

In 1855, he says, he put a good coat of compost manure on his garden, and could perceive very little benefit from it. The following spring he put on a dressing of ashes, and the results were wonderful. Such big beets, carrots, melons, squashes, &c., had rarely been seen before!

My opinion in regard to ashes is this: The one principal thing that we need to make our land rich is *ammonia*. To obtain this we have to make or purchase manures. Now there is no way of increasing the ammonia in our barn-yard manure that does not, at the same time, increase the potash, phosphates and other mineral elements of plants in *greater* proportion than the increase of ammonia. If, therefore, we supply our soils with the ammonia necessary to produce maximum crops, we at the same time furnish all the potash and other mineral elements that are required. In fact, we furnish *more* mineral elements than the crop requires, and there can be no doubt that on all farms where a liberal system of manuring is adopted, our soils gradually become richer in available potash and other mineral elements of plants.

I would not sell a bushel of ashes from the farm. I think they will pay to use as manure, but that they are, as a general rule, worth one dollar per bushel I can not believe. I have seen potash used to a considerable extent as a manure (by way of experiment,) but with the exception of beans and clover I have rarely seen any marked effect produced by its application.

"You think ashes are good for beans?"

In Mr. Lawes' experiments potash, in connection with other manures, proved useful. But the English horse-bean is a very different plant from the beans grown in this country. I see no reason to doubt, however, that ashes would be a useful manure for beans. At all events I mean to try them the coming season.

I think of planting beans in the orchard. It has been in grass for four years, and I suppose the trees would be benefited by breaking it up and planting some crop that will be cultivated through the summer. I was speaking to one of our most experienced fruit-growers the other day, and he said he had a young orchard that had been in grass for two or three years and the trees were as thrifty as he desired, and in such a case he thought it better to let it lie in grass.

There seems to be quite a diversity of opinions in regard to the advantages of cultivating an orchard. Some contend that if it is seeded down with grass and the land is liberally top-dressed with manure, the trees will do better than if the land is plowed and cultivated.

One of our nurserymen advised me to-day to set out a large orchard of apple trees in the spring. I

told him that I thought it was a poor time, as the high price of apples the past season, and the large profits realized in this section from good orchards, would induce farmers to plant extensively. But he says such is not the case, and, as his business gives him a good opportunity to ascertain the facts, his opinion is entitled to consideration.

I know a farmer in this section who sold 11,000 barrels of apples, principally Baldwins, the past season. Having such a large quantity he would doubtless get the highest price for them, and I presume he netted at least $15,000 from his orchard.

The figures have a very pleasant look, but how much there is to be done before you can hope for such results! The land needs thorough preparation. The trees must be set out, and cultivated and pruned with care, and you must wait six or eight years before realizing any returns for your labor. But so it is with every good thing. You must work and wait. In the end, however, you are pretty sure of your reward.

Beef cattle have advanced nearly a cent a pound this week in New York. The high price of grain is beginning to have its effect on the meat market. I was at Chicago last week, and was told that corn had been sold in Central Illinois at one dollar a bushel. No wonder that the farmers of the West have been sending their cattle to market by thousands and tens of thousands.

Prices of nearly all kinds of farm produce, except wheat, are as high in the West as with us. The Government advertised in Chicago for 2,000 bushels of beans. Bids were sent in amounting to 12,000 bushels, at prices ranging from $2.50 to $3.00, and the Government *accepted every bid and took the whole* 12,000 *bushels!*

The Government has just bought, at St. Louis, 100,000 bushels of oats at 87 1-2 cents per bushel, 100,000 bushels of corn at $1.09, and 3,000 tuns of baled timothy hay at $29 to $30 per tun. These are high prices. We none of us realize the enormous consumption and waste of the army.

At Wyandotte, in Michigan, a lady told me she had just paid fifty cents a dozen for eggs. At Springfield, Ill., potatoes are worth $1.25 per bushel. Butter sometime since was 40 cents a pound, and eggs 60 cents a dozen.

The English agricultural papers continue to devote much of their space to discussions of the relative merits of the different steam plows. One fact seems established: STEAM CULTIVATION IS A SUCCESS.

A company has been formed in this State for the purpose of introducing steam cultivation on our farms. I hope we shall see one or more steam plows at work the coming season.

There are two methods of increasing the productiveness of our farms. One is by liberal manuring, and the other by developing the inert plant-food which lies in such inexhaustible quantities in most loamy soils. It is with the latter object in view that steam cultivation promises such brilliant results. There are millions of acres of land in the United States that only require underdraining and thorough pulverization to make them immensely productive. We want a machine to scoop out the drains ready for the tiles, and then a steam plow or cultivator to tear up and pulverize the soil. We shall have both before many years—perhaps before many months—have passed.

I have just been reading an account of a Fen farm, situated in one of the dreariest commons in England, and which, from producing nothing but furze and ling, has been made to yield crops of 40 bushels of wheat, 48 bushels of barley and 1,200 bushels of mangold wurzels per acre!

The farm contains 500 acres. "On this small, light sandy farm," says the Editor of the *Agricultural Gazette*, "a herd of 50 to 70 cows is milked for the London market, a dry flock of Hampshire sheep, varying from 200 to 400 head, is fed, and hogs ranging in number from 1,000 to 2,000 have been fattened annually up to the average weight of 10 to 20 scores apiece."

In addition to this from 16 to 18 farm horses are kept, and the labor bill amounts to over $5,000 a year. Of course large quantities of oilcake and grain are purchased for the cows, sheep and pigs, and it is the enormous quantity of rich manure so obtained that has made the farm so highly productive.

This is "High Farming," but it is not "*fancy*" farming. It is a rented farm, and the occupier does nothing for mere show and parade. He carrys on the farm simply for profit.

One of the most successful farmers in this State said to me some time ago: "I have always employed a good many men, and spent a good deal of money on my farm;" and it is so everywhere. Sir Robert Brisco recently remarked at an agricultural meeting: "It is a dangerous and too prevalent idea that *land* gives the rent; it is not the land, but the capital invested in the land, aided by the farmer's judgment, which gives the rent and profit. As well might it be said that the plow or the fork yields the rent. Land can only be viewed as a machine through which the farmer passes his capital, which, worked with judgment, will turn out goods yielding a profit."

John Johnston wrote me to-day that he sold his pair of steers on the 20th of January at 7 1-2 cents per pound, live weight. They weighed 4,845 pounds

He says they gained about 800 pounds from last June. He fed them meal a little over two months. He has had steers gain much more than these. They had been worked, and did not gain any for a considerable time after he got them.

MEETING OF THE N. Y. STATE AG. SOCIETY.

THE Annual Meeting of the New York State Agricultural Society was held in Albany, Feb. 10–11.

The Treasurer's Report shows a balance in hand and invested in United States securities of nearly $4,000, in addition to $2,000 appropriated for investigations in regard to flax machinery. This sum remains on hand ready to be awarded to any invention worthy of the honor of receiving it.

Secretary Johnson in his Annual Report congratulated the farmers of the State on their comparative freedom from debt, and thought they were generally well prepared for the financial revulsion which was sure to follow the present inflation of prices. He alluded to the increase of emigration and to its beneficial influence, and thought it would continue. He spoke in encouraging terms in regard to flax culture, and read an extract from an Irish paper showing that flax cloth could be made cheaper than cotton. He commended Sanford & Mallory's flax dressing machine, which received a special prize of $100 at the Fair last year. Sheep were receiving more attention, to the manifest advantage of the farmers. The breed best to keep depended on location.

He recommended holding another trial of implements and machines. The trial held in 1852, at Geneva, had proved of great advantage. It attracted much attention both in this country and in Europe.

He contrasted the first Fair of the Society held at Syracuse in 1841, with that at Utica in 1863. No one could doubt that the Society had been of incalculable benefit to the State. The twenty-one volumes of Transactions embodied a mass of valuable agricultural information, which was highly prized by all intelligent farmers. Great Britain was making an effort to double her crops so as to be independent of foreign supplies. Can not this be done in this country? Farmers were never so prosperous as now. Mechanical appliances for facilitating the labors of the farm were never more numerous or effective. The crops last year were a full average.

He alluded to the dairy interest. The demand for American cheese in England was on the increase, and the factory system was rapidly extending and giving us a better quality of cheese. Our choicest cheese was equal to the best English dairies.

He alluded to the importance of fruit culture, and thought the Fruit Growers' Society of Western New York was second to none in the world in interest and usefulness.

On the conclusion of the Secretary's Report, the usual committee of three from each of the eight judicial districts in the State was appointed to nominate officers, and recommend a place for holding the State Fair. The officers nominated were unanimously elected, as follows:

President—JAMES O. SHELDON, Ontario.
Vice Presidents—Simon R. Bowne, New York; Samuel Thorne, Duchess; Herman Wendell, Albany; T. L. Harison, St. Lawrence; Solon D. Hungerford, Jefferson; Ralph Newell, Delaware; H. T. E. Foster, Seneca; Wm. A. Bird, Erie.
Cor. Secretary—Benjamin P. Johnson, Albany.
Rec. Secretary—Erastus Corning, Jr. "
Treasurer—Luther H. Tucker. "
Executive Committee—S. Campbell, Oneida; T. C. Peters, Genesee; Elon Comstock, New York; R. H. Avery, Madison; S. R. Pinckney, New York.

In regard to the place of holding the next Fair there was a tie vote, twelve for Utica and twelve for Rochester. The decision of the question was left to the Executive Committee.

On Wednesday evening, the Hon. Stanton Gould, who was appointed by the Society to visit the sorghum growing sections of the West, made an interesting report. He found the cane injured by frost, and estimates the product of sugar and molasses at not much over half what it was the year previous. He found little if any *sugar* produced from the sorghum, and was not sanguine that it ever would be produced from the sorghum in any quantity. It will produce excellent molasses, where the climate is suitable.

He found the largest crops on the bottom lands, and they escaped the frost, owing to their being enveloped in fog. The sirup from the poorer upland, however, is *richer* than that from the bottom land. In this State, he thinks bottom land will be best for sorghum. Any soil that will produce 40 bushels of Indian corn per acre, will produce from 60 to 100 gallons of molasses. He *heard* of one acre at Quincy, Illinois, that produced 500 gallons, and another case where 600 gallons per acre was obtained. 320 gallons was the largest yield he was able to verify by personal inspection. The climate in this State is not warm enough for the best success in sorghum culture. In Southern Ohio and Illinois the average temperature of the three summer months is 71°, while in the Genesee Valley it is only 66°; and as a general rule the frosts in this section are earlier than in the cane growing regions of the West. On the whole, then, our prospect of growing our own sirup is not flattering. In regard to the best time of planting, and whether the seed should be soaked or not, there was much difference of opinion. He thought as a rule, it should be planted at the same time as Indian corn—"when the oak leaf is of the size of a squirrel's ear." The seed should not be covered more than a quarter of an inch deep. Thorough

pulverization of the soil is of great importance. The field should not be cultivated after the crop was knee-high. Cane ripens better if the suckers are left on, but the growth is less. If the suckers are cut they will start again. It is better to bend them down and put a little soil on the ends to hold them.

The chinch bug attacks sorghum. The best preventive is to sow strips of buckwheat and Hungarian grass. They will feed on these crops and not touch the cane.

He spoke highly of Jacob's Evaporating Pan. The juice flows in continuously, as fast as it evaporates, not being more than a quarter of an inch deep.

After the conclusion of Mr. Gould's report, Dr. Fitch, Entomologist to the Society, gave an interesting account of the asparagus beetle, which has proved so destructive in the neighborhood of New York city. He also alluded to the cut worm, which has proved so destructive to flax the past season. He thinks there are several varities of cut worm. They are most destructive in June, eating all kinds of vegetables. In the autumn they burrow beneath the soil, where they lie in a dormant state till spring. They can be killed by *thawing* and freezing them. Gradual thawing in the earth does not hurt them; but if they are exposed so that the sun thaws them rapidly they are destroyed. With this object *late* plowing in the fall is beneficial. Early plowing in the spring, if we have freezing and thawing weather afterwards, would be useful.

We were not able to be present on the second day, but learn that there was a good exhibition of grain, and other products. The subject of manures was discussed, and it appears that the majority of those present were in favor of spreading manure on the surface as fast as it was made; though, of course, there were some intelligent farmers who disapproved of the plan.

SWELLED LEG ON A COLT.—On page 66 of the February number of the *Genesee Farmer* "W. T." desires to know how to cure the swelled leg of his colt. It can be done by the proper use of the roller bandage. The bandage should be at least six yards long and three inches wide. It should be rolled up tight before applying, beginning at the top of the hoof, with an equal pressure up to the knee and back again, so that every part is covered and put on snugly. A few pins in three or four places will keep it from slipping, as the parts yield to the bandage. The bandage should be kept on when the horse is not at work, and applied as soon as he is brought into the stable. It is better to use the animal every day. The bandage presses out the effusion and gives tone to the limb. I will warrant an entire cure if properly done.—E. B. WOODRUFF, *Morristown, N. J*

SHORT SERMONS FOR FARMERS—No. 3.

Neither say they in their heart, let us now fear the Lord our God, that giveth rain, both the former and the latter rain, in his season; he reserveth unto us the appointed weeks of harvest.—*Jeremiah*, 8: 24.

The Prophet Jeremiah exercised his office at a time when the Jews had relapsed into the grossest iniquities. God sent him to reprove his people for their sins and to denounce his judgments against them if they continued in their sins. He had little success in his mission, though earnest in his fidelity. He suffered opposition and persecution, but nothing could deter him from declaring fully and faithfully the messages with which God charged him. He was so deeply and constantly afflicted by the obstinacy of the people and the awful judgments which he was commissioned to denounce against them, that he is called the weaping prophet.

In the text the Prophet mentions one sin, which with others was provoking the Divine judgments. The sin was this: not recognizing the providence of God in succeeding the labors of the husbandman in abundant harvests. They had become so besotted in sin that the Divine goodness in filling their baskets and their store with the fruits of the earth, did not affect their hearts with gratitude and love to the author of their temporal blessings.

The providence of God is so manifest in the production of the fruits of the earth, that the husbandman who does not recognize and acknowledge it, must have the eyes of his soul blinded by sin. If his heart is not affected by the sentiment of grateful love in view of the Divine goodness in crowning his labors with success, it must partake of the vileness with which the Prophet charges the Jews in the context: "This people hath a revolting and a rebellious heart; they are revolted and gone."

No class of men are so constantly near God in his providence as farmers. The tradesman and the machanic are, of course, dependent for success upon the providence of God, but not so immediately and directly as the farmer. The rain, the dew, and the heat of the sun, are under the direct control of God. He sends the rain, the hail, the thunder and lightning, the frost and the snow, the wind and the whirlwind. He acts through second causes. What we call the laws of nature are nothing more nor less than the uniform and regular methods in which God exerts his wisdom and power. In these uniform methods and through second causes he exerts his efficiency to a greater degree sometimes than at others. At one time the sun may shine in a cloudless sky with far less heat than is given in the same circumstances at another time. It is beyond human philosophy to explain this difference. But it is easy of explanation upon the philosophy of the Bible, which ascribes all the operations of nature to the direct agency of God.

Who can explain, upon the principles of what is called natural philosophy, why one season is colder one year than the corresponding season of another year? Why one season is wet and another dry? Why one day the wind from the N. W. is twenty degrees colder than it is the next day? Why one year the farmer is overrun with grasshoppers and another year exempt? One year worms cover our orchards, and if not destroyed, their ravages seriously diminish the profits of the farmer. Another year he is exempt from their annoyance. Who can explain this upon the principles of natural philosophy? God punished his ancient people by bringing upon them the palmer-worm, then the locust, then the canker-worm, then the caterpillar. Was this done by a blind law of nature without the direct agency of God? It could not have been. So now the ravages of the fly, the wire-worm, the curculio and of other insects are under the control of God, which is exercised through second causes. God can exert his power, through what we call the law of increase, so as to multiply to an unlimited extent destructive insects, or through the same law he can prevent their pro-creation. In accomplishing these ends he does not work a miracle, for he constantly exerts his power through second causes, giving them at one time a vigor and power which he withholds at another. He can send rain in drought, or cause the rain to cease. He can send cold and snow in seed-time, or he can send warmth and fructifying showers. These things he can do and does without working a miracle. A miracle is an unusual exertion of his power—*i. e.*, without the intervention of second causes.

REMARKS.

1. This subject shows us the shallowness of that philosophy which teaches the uselessness of prayer for any good dependent upon what is called the operations of the natural world. The Infidel, in his ignorance, says we ask God to work a miracle when we ask him to send rain in drought—for heat in a time of unseasonable cold—or for abundant crops, because the world must go on according to fixed and immutable laws—*i. e.*, these laws govern the world, instead of God's governing it. Would the Infidel be willing to live in a society where inanimate, unintelligent law governed, without the agency of the judicial and executive power? Demolish our courts, discard all executive officers, annihilate our jails and prisons, and let the law remain in all its innate majesty and power. Would the Infidel be willing to live in a society in these circumstances? And yet he prefers to exclude God from exerting his power in nature and governing the world by his constant agency exerted through second causes. He prefers to be the subject of a blind, unintelligible and unintelligent something which he calls the laws of nature, rather than to be under the control of One ever present, active, intelligent, infinite Being, who without a miracle can answer prayer for things he has promised, and which involve his immediate and constant control over all nature.

The Christian exercises the profoundest philosophy when he prays for all those influences in the natural world which are connected with his well-being. God can give them without working a miracle. He often has given them in answer to prayer.

2. We see from this subject that the husbandman ought to be a praying man. He associates himself so closely with the power of God, exerted in crowning his labors with success, that he acts in an unbecoming manner when he restrains communion with him upon whom he is so immediately dependent. There is something sublime in a husbandman, after having done his part to produce a crop, bowing before infinite power and goodness, seeking a blessing upon his labors. The reflex influence of this habit of prayer will be seen in careful and diligent culture, and in the neatness and thrift of everything around the husbandman's home and fields.

MAKING CHEESE.—I keep a dairy of thirty cows, and think of making cheese the coming season, and wish to make it as easy as I can for the women folks. Now, will you or some of your correspondents give me information as to what is the best way for warming the milk and setting the curd, and how much salt and runnet it wants to 50 pounds of cheese? If it is right to use a furnace to warm the milk in, where can it be got, and what is the cost of it? I want all the information I can get about making cheese, for it is a new business to me.—WM. TENBROECK, *East Troupesberg, N. Y.*

ORINOCO TOBACCO.—Mr. D. S. Heffron, of Utica, N. Y., writes us that he has raised this new variety of tobacco for two years, and finds it at least fifteen days earlier than the Connecticut Seed Leaf. In the *Country Gentleman* of February 11, E. A. King, of King's Ferry, N. Y., states that he raised it last season, and good judges pronounced the cigars made from it equal to the best Havana. He thinks it will ripen in the coldest regions of this State.

WHAT ARE THE BEST PASTURES FOR DAIRY COWS?—In answer to this question a correspondent of the *Genesee Farmer* in Michigan recommends seeding down the land with one-half clover, one-fourth timothy grass, one-eighth June grass, and one-eighth white clover. He thinks that the pastures ought not to be allowed to lie down longer than three or four years before being again plowed.

STORING HAY IN STACKS VS. BARNS.

The following letter from D. F. Rogers, of Waltham, La Salle county, Ill., was read at a recent meeting of the New York Farmers' Club:

"I notice in a late number of the *Tribune* a discussion upon stacking grain and hay. Allow me to add a word out of some years' experience in both methods, viz: stacking and storing under barn roofs. It seems to me that when hay is put up in long, narrow ricks, made as high and steep as the wind will allow, built solidly and well up in the middle, it will keep better in every respect than if stored in barns. There are many good reasons for this opinion, but I'll risk the opinion alone this time.

"As to building barns to store small grain, the idea seems almost ridiculous to farmers here, who raise from fifty to one hundred acres every year; it would take a fortune to build such an establishment, and then with our present method of thrashing the grain would all have to be moved out again when the 'machine' came round. Everybody who has ever farmed in the West knows that well-bound, dry wheat can be stacked so as to stand any weather, for any length of time, and with no loss worth mentioning, even by a New Hampshire gravel-scratcher, who saves every kernel.

"There is, no doubt, a great amount of hay and grain lost by bad stacking, but I have not very faint recollections of hay in scaffolds in New England ruined by the odors from stables beneath them, and of 'mow burnt' stuff, that smelt to heaven from the other side of the floor. The fashion of thatching stacks, so common in England and other places, is entirely unnecessary out here. Our dry, windy atmosphere is a sure preventive of mold and must; in fact, more hay is spoiled here by being dried to death than in any other way.

"The habit among tidy farmers here is to build ricks instead of a round stack of hay, as they cut better; a slice cut from a round stack exposes it to the danger of being blown over, and I never saw a stack or rick open its whole length to feed from.

"An excellent system for farm buildings is low, snug stables, and sheds for horses and cattle; low, roomy granaries for thrashed grain, never tempting the wind or fire with more than one story, and stack neatly all hay and grain at a safe distance.

"I hope this subject may come up before the Club again."

Mr. Carpenter contended, with the light that he had derived from the cultivation of a hundred-acre farm in a rocky region, that no good farmer ever builds stacks, and that it was in the highest degree economical to store everything in barns. He also contended that hay could be stored in a barn in a greener state than in a stack. In short, he is opposed to all stackers and stacking.

Mr. Bergen thought that the gentleman who wrote that letter knew better about the circumstances of that country than we do, and that his system was best there.

Dr. Trimble said that some of the best Pennsylvania farmers stack much of their hay and grain, and if it was as uneconomical as Mr. Carpenter would have everybody believe, he did not think it would be persisted in. Then, look at the vast quantity of salt-marsh hay put into stacks. Would it be economy to build barns to store that?

Solon Robinson gave a description of Western farming, and showed how utterly impossible it would be for men who grow from 100 to 500 acres of grain a year to build barns for its storage. So obvious was the necessity as well as economy of stacking, that he thought a man as hard to be convinced of such an important fact, might have it hammered into him upon an Illinois prairie. What I want, said Mr. R., is that this Club shall not indorse the preposterous notion that stacking is a sign of slovenly farming—that a man must not raise hay and grain unless he has a barn to put it in. We should rather teach people that, although a barn is a convenience, it is not a necessity; and that great prairie farms can be made profitable where all the hay and grain is put up as described in this letter. Even the thrashed grain can be safely stored in rail pens, and it would be almost impossible to find storage for Indian corn in any other way than in rail-pens or cribs, where it is most abundant.

A gentleman from Illinois, who was present, confirmed the statement of this letter, excepting in relation to thatching. That he thought as important on the prairie as in any country, and with that, he thought stacking decidedly the best way, even were it possible to furnish storage in barns, to put up both hay and grain on the prairies.

FARM WORK FOR MARCH.

Finish the various jobs of winter, and prepare to commence spring labor in earnest. Examine all tools, and put them in good order. Paint and grease carts and wagons. Examine and replace harrow teeth. Repair hinges of sagging gates, and nail loose boards on fences. Procure and clean grass seed for spring seeding. Examine and obtain a good supply of the best seed of oats, barley and spring wheat. See that teams are kept in good working order, and if they can be frequently used, half a day at a time, they will become better accustomed to the active labor of spring. Inspect thoroughly all the barns and out-buildings, and see that every part is in good order. Oil harness, and repair it where necessary for spring work.

Sow clover seed early—it may be most accurately done on a thin snow, rendering the seed and footsteps visible. Plant early potatoes, for family use, as soon as the ground is thawed; if previously sprouted, in a warm place, an inch or two in length they will come up sooner. Clean out cellars thoroughly. Give special care to the cows and calves. Look over the directions for the two previous months, (see January and February numbers of the *Genesee Farmer*,) for additional suggestions.—*Tucker's Annual Register.*

POULTRY HINTS FOR MARCH.

WRITTEN FOR THE GENESEE FARMER BY C. N. BEMENT.

This month poultry require particular attention, and the hens must be looked after. If not already done, old nests and laying-boxes should be cleansed by removing the litter, and scalded with boiling water, and washed inside and out, with hot lime-wash, to sweeten and free them from vermin. Let nest-boxes be often replenished with fresh litter of hay or straw.

The roosting department should receive a thorough white-washing; the roosting-poles should be passed through a fire made of straw to destroy the lice as well as their eggs; then lime-wash and replace them. The room should be thoroughly cleansed, the droppings of the fowls removed and the floor strewed with slaked lime, and then a layer of muck or fine, dry mold. See that the fowls have plenty of fresh water, gravel, broken bones or shells, and old lime mortar—not forgetting the box of fine sand and ashes for them to roll and bathe in, as the vermin do not like dust thrown in their eyes.

It has generally been supposed that there would be great difficulty in rearing chickens hatched in February and March on account of the cold; but with proper conveniences, we found it more certain than those hatched in June. Many persons fail in rearing chickens for want of a little attention to them at this season of the year.

Some of the early-laying hens—the Cochins and Brahmas, for instance—will begin to show a desire to incubute, and if early chickens are desired it is best to humor this propensity and let them set. See that they have selected a safe, warm place, where she will not be disturbed by other hens depositing their eggs to the general fund. Eleven to thirteen eggs, as fresh as possible, should be given her, and a date twenty-one days in advance should be marked in a conspicuous place on the nest-box with chalk.

Our plan is to remove the hen with her little family from the nest, say from twelve to twenty-four hours after hatching, putting them in a warm room for a few days to gain strength; then, if the weather is fair, place them in coops made something in the form of a forcing-frame or hot-bed covered with glass, and set where it will receive the whole force of the sun; if sunk in the ground two feet or so, or if on the surface, bank up with fresh horse-dung, and there will be no difficulty in rearing chickens, if the necessary requisites are furnished—such as fine gravel, lime, dust and ashes.

When the chickens first come out, feed for ten or fifteen days with bread soaked in loppered milk or thickened curd and hard-boiled eggs, chopped fine; afterwards with coarse meal or fine-cracked corn. All kinds of soft food, such as fine meal mixed with water, should be avoided at this age, but plenty of pure water, which should stand before them in such a manner as the chickens can not get into it.

To keep them healthy they want something for food that will take the place of animal matter, that they take in summer, in the form of bugs, worms and grasshoppers. Some fine chopped fresh meat should be given them daily. The mother hen should be supplied with plenty of corn, to prevent her from eating the chicken food.

TO CURE A HORSE FROM PULLING AT THE HALTER.

Eds. Genesee Farmer: I have seen many barbarous remedies in print for this fault, which, so far as my experience goes, is very easily and safely remedied. I think that a horse will pull as much by the head, with a common strap halter or bridle, as he can by the breast through a collar, and perhaps even more, for to pull backwards he uses both his fore and hind legs, while in drawing forward only his hind legs are used; and the result is, that in pulling backwards he is pretty sure to break any ordinary fastening, and thus confirm the habit. But the case is different if you fasten him by the neck: there is then, in pulling, a pressure upon the muscles that paralyzes, in a measure, their force.

Now, then, get a strong two-inch strap, with a stout buckle, and put on it a ring, such as is used for halters, and buckle the strap around his neck, and, if you wish, let it remain there. Get a three-fourth inch rope and tie a large knot in one end, and bind the other with a thread; carry this in your carriage, and when you wish to tie him, slip the rope through the ring and tie him to a strong post. He will pull a few times, but will accomplish nothing but his own defeat, and will soon give it up.

Such is my experience, and I have never known a horse to hurt himself pulling by the neck; while with a rope halter, back of the ears, there is danger of producing permanent injury, and I think it one of the causes of pole-evil. S. B. P.

Muskegan, Mich., February, 1864.

Save Your Old Files and Rasps.—A correspondent of the Maine *Farmer* says old files and rasps may be made nearly equal to new ones. First boil them in soap, ley or a mixture of slaked lime and soda in water. This done, wash them in water and directly throw them into a vessel full of diluted sulphuric acid, formed of one part acid and six parts water; let them remain here for some time, the exact period being easily found by taking out a file, observing whether the nicks appear sharp or not; as soon as the sharpening is effected, the files must be taken out and washed in another vessel containing a solution of soda, about an ounce of soda to a pail of water.

PAINT FOR BUILDINGS.

THE matter of painting out-buildings on a farm was recently discussed at the meeting of the New York Farmers' Club. The question was not whether they should be painted in order to preserve them—that was taken for granted—but what they should be painted with. Solon Robinson said he would give a receipt, which he had given many times before, in hopes that some might be induced to use this cheap, durable paint, which is a better preserver of wood than oil paint, and has this advantage: it can best be used upon unplained boards. This is the formula: Take one bushel of good whitewash lime, and slake it, and mix it into a fine, smooth whitewash. It will take at least forty gallons of water. Then add the following ingredients: 20 lbs. of Spanish whiting; 17 lbs. of rock salt; 12 lbs. of sugar. This mixture should be well stirred, and if mixed a day or two before using it is better. Indeed, it may be kept as long as desirable, and when needed for use, after thoroughly stirring, it is ready. It should be put on like any other whitewash, in a thin condition, and rough boards will require three coats to make a durable white color, which will stand the weather three or four years. It is one of the very best applications for shingles. Its color can be modified to a drab, by Rosendale cement, or to a yellowish shade by yellow ochre, and reddish by Venetian red, or any other tint, by some cheap color. Mr. Robinson had used ashes, and also blue clay, to get a brownish tint

JOHN G. BERGEN—I am very glad to have this useful information go forth to the people, but I should like to hear why the ingredients added to the lime-wash improve its value so much that it becomes a permanent paint.

SOLON ROBINSON—The lime and salt are both antiseptic, and the adding of the salt makes the wash more penetrating. The whiting is of the nature of clay and forms a white body on the surface, and the sugar makes the whole so adhesive that a man may rub his black coat against a wall painted with this compound, and it will not show a shade of white.

WM. S. CARPENTER—I painted one barn-roof with oil and lampblack, and another with lime-wash and lampblack, and the last holds its color much the best and was materially cheaper. Lime is an excellent preserver of shingles. Witness the soundness of old roofs on the lower side of chimneys.

Alderman ELY recommended dissolving about a quarter of a pound of tallow in a pailful of the hot lime as it is slaked for whitewash, which will make it adhere much better and prevent it from setting off upon everything that touches it, as is too often the case with whitewash. He also said that he had tried the "India rubber paint," but does not intend to try it again. It is not valuable.

NOTES ON BACK NUMBERS.

BY O. W. TRUE, FARMINGTON, ME.

EDS. GENESEE FARMER: I marked two or three articles in the November (1863) number to give a word upon, but it has run along until now before getting ready; yet, as they are questions of standing importance, if of use then, will be equally so now.

Brining Wheat: p. 335, No. 11.—My father once spoiled eight bushels of wheat intended for seed by brining it, in this way: It was thoroughly washed in brine-water—do not know just the strength of it—and then putting slaked lime into the wheat in order to dry it. On the afternoon intending to sow the wheat—it was prepared in the forenoon—it began to rain, and rained for three days like a shower, so that it was not sowed. It did not heat or sprout, but as all the neighbors thought it not safe to sow it, only about one peck was sown, to try it, upon a favorable piece of land. Not over one-fourth germinated. It was White Spring wheat of good quality. This was a sufficient warning to all who knew anything about it, not to let wheat remain long after brining before sowing. Have not known of seed being materially injured in salt or vitrol brine if not allowed to stand over twenty-four hours before sowing.

Peas among Potatoes: p. 339, same number.—I have raised peas among potatoes repeatedly. My father has done the same, and continues to do so, and many of my friends, with one-half of the rest of the farmers, do so every year, and I have yet to hear of anyone who objects to growing peas with potatoes on account of injury to the potatoes in pulling the peas. Some object to the peas because they are in the way when hoeing the potatoes, because they will come up and grow faster, in the early part of the season, than the potatoes, so that they will be somewhat in the way. The peas are not pulled until the potatoes are nearly or fully grown. The large variety, or Marrowfat, are usually planted at the same time with the potatoes—putting from one to six in a hill with the potatoes. Formerly I put only one or two in each hill, but for some years past I have planted from four to six, because the bugs destroy some, and some are spoiled in hoeing the potatoes. They shade the hill, and keep the soil from crusting over so hard, until the slowly-growing potatoes are fairly up, and then the potatoes, upon our hard, rocky upland, loamy upland or alluvial bottoms, do not rot so badly as when no peas are with them—though not by any means, as some have contended, a sure preventative of the rot.

A GOOD GLUE is prepared by dissolving common glue in vinegar to the consistency desirable for use. It will keep for a long time.

THOUGHTS ON CANADIAN AGRICULTURE.

We have received from an intelligent English farmer, who has resided for some years in Canada, an interesting communication on the general subject of agricultural improvement. His views, he says, are "somewhat peculiar," but we think they are well worthy of consideration. We make a few extracts, and commend them to the perusal of our readers:

"I have full faith in farming as a profitable occupation, and have proved my faith in it by taking a considerable interest in the clearing up from the forest during the last four years of several hundred acres of land, which is now in cultivation, and I find that it yields a better return for capital invested than ordinary business pursuits. To a business man the returns are slow, but they are sure, and when the improvement of property, as well as the proceeds of the farm, are taken into account, it is far more profitable than ordinary business avocations.

I most unhesitatingly say that the best (certain) operation that any one can undertake, who is at all adapted to the busines, is the clearing and cultivation of wild land.

Land in a state of forest is worth a certain sum per acre, according to the density of the population of the neighborhood. Commencing at a dollar an acre for good farming land, it reaches to fifteen dollars per acre so soon as there are five families settled on every square mile in the surrounding country. This fact has been proved over and over again by the statistics of American and Canadian civilization and improvement. I refer you to a rare work published in 1798 (*American Gazetteer*, Jedidiah Morse M. D., Boston and London,) for this fact, which has been, and is, borne out by every day experience.

Forest land costs to clear and fence it, in ten-acre fields, sixteen dollars per acre. If the potash resulting from the ashes is manufactured, it makes a return of one-fifth to one-half of the cost of clearing, according to the class of timber which covers the land.

The first crop of wheat, with the potash, will always, in average seasons, pay for the entire cost of clearing. You therefore get all the outlay of clearing back from the land itself, in the course of the second year from the time you commenced operations. And what is your position then? You have a productive property. It is good, as such, for all time. It will always yield, if only used as pasture land, a fair interest for its cost, and when cultivated it yields just in proportion to the skill and labor bestowed upon it.

From the time the forest is removed the farm becomes a manufactory of provisions for the human family; but it is not like other manufactories—an investment which is destroyed by time, accident, or change of profession. A mill, cloth manufactory, brewery, distillery, or other business of the kind, is valueless when the owner ceases to use it; and if it remains out of employment for a few months is depreciated some 25 to 50 per cent.—a few years' idleness and the property is destroyed for all useful purposes. But a farm, when once improved, always represents a value equal to the first outlay; even if abandoned, the fences and buildings only go to decay, while the land, by lying fallow, does not, at all events, decrease in power of fertility, and only requires renewed exertion on the part of the owner to afford a rich return.

We have yet in Canada to come to scientific farming. As yet, (except in comparatively few cases,) our farming has been mere plowing, and sowing, and reaping, drawing upon the richness of the soil with but little return in the shape of manure, or even skillful manipulation. It is this reckless mode of procedure that has brought upon us the various agricultural plagues with which we have been troubled. There can be little doubt that there are as many wheat weevils or midge in England as in Canada; but in England the same number of insects have to work upon forty to fifty bushels to the acre, instead of, as in Canada, from ten to twenty The consequence naturally is, that each field in Canada suffers to twice or thrice the amount that does the same quantity of grain in England. The same may be said of the other destructive pests which disappoint the hopes of the Canadian farmer—rust, from sowing out of proper season, and for want of proper and healthy tillage and drainage, and mildew from the same cause. The Hessian and other flies are of course subject to the same observations as the midge.

We certainly have untimely frosts, from which the English farmer is free; but the continued moisture and untimely rains certainly make up the difference between the productiveness of the two countries so far as the elements are concerned, excepting the cold. Our winters, however, are not balanced by any similar drawbacks in Britain. Six months keep of cattle and stoppage in the growth of all farm produce instead of from two to three months- is a disadvantage of which too much can scarcely be said; but against this we have the more rapid growth of our summers.

Another most serious drawback to American and Canadian farming is the running out and depreciation of our various kinds of wheat. This is a frightful evil and it seems a mooted point whether it is caused by want of skill or climate. We have in Canada had a succession of the very finest kinds of wheat, most of which are already run out, or at all events greatly depreciated. We have now no good

red wheat. The Mediterranean, although a useful stop-gap, and better than none, is by no means a fine kind of wheat, and this seems to lose its only valuable quality, "earliness," year by year. The Siberian, which some twenty years ago redeemed us from agricultural beggary, is gone—disappeared as a crop, and is now only to be found in scattered cases among other spring wheat. The Fife wheat is fast losing its power of resisting rust, and if not improved will be in a few years among the things of the past. Our white wheats, once our pride and glory, are now the prey of the midge, if wet or other mishaps retards their ripening for one week; and in short, if our agriculturists do not either improve the old kinds of wheat, or introduce new ones, we shall sink from a wheat country into growers of rye, barley and pulse, and inferior cereals.

The experiments and success of Hallett in his production of "Pedigree Wheat" are most encouraging, but it is a solitary instance only, and is a grain not adapted to our climate. It winter kills easily, and grows in such dense masses as to be peculiarly subject to rust—which is a thing no one can contend against.

What we want is a *rust-proof grain*—something that will come late enough to miss the midge, and yet not be destroyed by the rust. Hitherto the only rust-proof grain we know of is the Fife, and that, as I said before, is fast losing its most valuable quality.

While upon this subject, allow me to offer your readers a suggestion:

The first time any enterprising agriculturist has a field of his own rusted, or can purchase one from another person that has suffered from that cause, thrash it out, get some wire-sieves adapted to the purpose, sift the whole produce of the field through different finenesses of sieves until the best grains are separated from the rest; sow these separated grains, and at all events you have a chance of procuring a rust-proof grain. There are most likely some ears among the rusted crop that have resisted the influence—from what cause we can not know—but as Mr. Hallett has proved by his "Pedigree Wheat" "like produces like," so grain that has withstood rust is more likely than not to produce seed that will again resist it.

It is seldom that farmers will do such work as this. They either have not the sieves proper, or they have not the time to attend to it, or they have not the inclination or enterprise to go into what they call "theory:" they will rather purchase a fair seed grain from a neighbor than make a good one for themselves.

One of the best proofs that could possibly be offered that, although wheat, *as a crop*, runs out, yet that, as *individual plants*, it not only does not run out, but continues its individuality to such an extent as to be recognizable, is afforded by the fact that the Siberian wheat I before spoke of, although it no longer exists as a crop, still exists as an individual kind among other wheat, and apparently these individual ears afford now as fine a grain as did that variety when exclusively cultivated by itself. This would seem to argue that *selection* and *care* would yet return to us these valuable varieties which, as crops, have vanished from among us.

Little, however, is to be hoped for in this respect, until we discover the means of separating the depreciating portion of our seed wheat from that portion that will continue the kind. How is this to be done? It surely should be larger, or heavier, or smaller, or lighter. There must be some difference, one would think, and indeed we know that there is some difference, but what is it?

Mr. Hallett has proved that if you take all the grains in an ear of wheat and plant them in a row, that there are some (generally two or three) of the plants that show a vast improvement on the parent stock. A large number of the rest are similar to the parent seed, and a large number are inferior. He does not give us the relative proportions of the two last kinds, but from the known fact that with us all kinds run out in about ten or twelve years, we may suppose that the inferior plants out number the others in certain proportions. These, no doubt, after a time, form the principal part of the seed-grain, and the consequence is that the kind of grain is "run out." Now it is only a few people that have the taste, or time, or the patience, or power, to be improving their seed wheat by constant selections after Mr. Hallett's plan. But these grains of wheat which produce the improving quality, and those which produce a grain which does not deteriorate, must differ from the others. Let us find out that difference, and separate them from the inferior, and the work is done, and we are secure in keeping up our stock for the future.

As the case at present stands, the general opinion of our best agriculturists is that seed wheat which reaches us from the North improves for a time, then remains stationary, but finally, though slowly, deteriorates; while seed wheat procured from the South, runs rapidly down in quality and productiveness, and finally runs out.

This may be the fact, or it may be one of those popular fallacies which so often get a hold on the public mind, but the existence of the opinion is undoubted. Our hopes now rest on importations of seed from Northern ports, and many advocate the importation from Siberia and Northern Europe."

We should be glad to hear again from our correspondent, and in the mean time will our readers give their views on the subject here discussed?

THE ROTATION OF CROPS.

THE following remarks by Prof. Anderson, Chemist to the Highland and Agricultural Society of Scotland, on the rotation of crops, will be read with interest by all intelligent farmers:

"The points to which I am about to advert are many of them of an obscure kind, and I shall have some difficulty in putting them in a clear and satisfactory way before you. They are mainly deducible from some experiments and observations made by Messrs. Lawes and Gilbert. These observers, as is well known, have experimented with the same crop on the same soil for a number of years, both with and without manure, and they find it possible to grow wheat for sixteen years in succession with comparatively little diminution in the amount of the crop. It may be said that this continued growth of wheat is due to the fact that their soil is extremely rich in the substance that wheat requires. But see what occurs when another plant is taken. Beans may be cultivated for twelve successive years, and a crop may be produced, but not without a very conspicuous diminution. If the quantity of nitrogen in the bean be taken as the test of the crop, it appears that during twelve successive years it will draw from the soil an average of nearly 48 pounds weight of nitrogen, but the first six crops of beans averaged 70 pounds, and the last six, 26 pounds of nitrogen, so that there is a very considerable diminution in the quantity. But see how important is the difference in the the total quantity. The wheat crop during these successive years removed on the average only about 24 pounds of nitrogen, while the beans abstracted 47 pounds, or nearly twice as much. In the case of clover again, they have found that by no means can they produce more than three or four successive crops. They may manure the soil as they please, apply to it any kind or any quantity of plant food, but nothing they can do will enable them to increase the number of crops of that plant which can be grown in succession. No principle or system of preparing or manuring the land that they could adopt had any effect, and the diminution in the amount of produce is extremely remarkable; for they found that the second crop of clover, with wheat intervening, was only about one-ninth of that produced in the first year. Here it is very clear that the amount of plant food did not affect the produce, and that a supply of the necessary elements is not all that is required. Going still further, more remarkable results attract our attention. When ten crops of beans were grown, one after another, without manure of any kind, they found that the average of nitrogen removed from the soil was 34.7 every year. If they employed mineral manure, the average quantity removed was 51-1 pounds. Now, with ten crops of wheat, taken in succession, without manure, the average quantity of nitrogen drawn from the soil was 23-4 pounds. But if they took five crops, with five intervening years of fallow, they found at the end of the ten years that the five crops of wheat had withdrawn almost the same quantity of nitrogen as the ten crops in ten successive years—so that, alternating a year of fallow with every year of wheat had the effect of doubling the amount of the crop. The amount of nitrogen removed by the ten crops in these ten successive years was 234 pounds, and the total amount removed in the five years of fallow, with five of crop, was 219-3 pounds—or a difference of about 14 pounds. Each crop in the ten successive years drew 23-4 pounds, and with five years of fallow and five years of crop, the average amount drawn was 43-9, and dividing these by two, we get the average over the ten years, which was 21-9.

"The experimenters next proceeded to grow wheat with alternate crops of beans—five crops of wheat and five of beans in place of the fallow, as in the preceding experiment. Now, these five crops of wheat alternated with those of beans yielded 235 pounds of nitrogen by the end of the ten years—just about the same as when the ten crops successively were grown; but during the intermediate years, the beans were engaged in abstracting nitrogen from the soil and air, and they had actually withdrawn 48-9 pounds of nitrogen every year, so that the taking away of that element from the soil by the five crops of wheat did not prevent the beans taking exactly the quantity which they required. You will thus perceive that the ten crops of wheat contained a certain quantity of nitrogen; that five crops of wheat with five of fallow contained about the same quantity; and that five crops of wheat and five of beans took much more than double the quantity; for the wheat took as much as if there had been no beans, and the beans took the quantity they required. Now, here is a fact of which we had no previous definite idea at all. I do not apprehend that practice offers us any definite facts of this kind, and in making these experiments, Messrs. Lawes and Gilbert have opened up an entirely new field of observation. In the experiments to which I have referred, the soil was left in its original condition, no manure being employed; but they found that if they added manure, especially mineral manure, the result was that the five crops of wheat, when alternated with five crops of beans, gave 207 pounds of nitrogen, and the five crops of beans which alternated with them yielded 227-2, the proportion, in this case, being not larger, but actually smaller, than where no mineral manures were employed. Now, how are we to explain this? If we look at it, we see very distinctly that the question with regard to the mineral ma-

ters contained in the manure throw no light whatever upon it. Here is a plant—the wheat—which takes a certain quantity of material from the soil, and it does not seem to matter how that wheat is grown. It is immaterial whether ten successive crops be taken or five, with beans intervening—exactly the same result is obtained; and if there be thrust in between five of wheat, five of another plant, we get all its produce, as it were, over and above the wheat. It would appear, then, that there are some advantages in growing crops alternated in this way; for beans, when grown ten times successively, do not yield so large a quantity as when put between successive crops of wheat. Take these facts how we may, it must be admitted that they seem to indicate that the rotation of crops is a far more complicated question than has been supposed, and that if a proper explanation is to be found for it, a class of facts to which but little attention has been hitherto paid must be taken into consideration."

FARMING IN NEW BRUNSWICK.

Eds. Genesee Farmer: One year ago last August, I was in the Province of New Brunswick, and while there made some notes on the peculiarities of the country, and upon their system of farming. I found that farmers there are not so much perplexed to determine what crops to plant and sow, as they are in this latitude, for they informed me that they raised only four crops that were successful with them, grass, oats, buckwheat and potatoes. The climate being unsuitable to a wider range of crops. What wheat and corn they make use of they are obliged to buy, consequently their principal reliance for food is on their buckwheat and potatoes. I remarked incidentally, that if buckwheat was as uncertain a crop with them as it is with us, it would be a poor reliance for the staff of life. I was informed, however, that with them it was a staple crop, and always succeeded, but that they raised a different variety from ours—that they formerly raised the common black variety, and found it was a failure from drouths or early frosts.

The variety now raised is called the rough buckwheat, the kernel is about the size of the black, and triangular, but in each side and extending from end to end is an irregular cavity, causing the kernel to be quite rough, and in color it is grey, and is sometimes called the grey buckwheat. It yields forty to sixty bushels to the acre, and can be sown in the spring as early as oats, or in July as late as the black variety, and is two weeks earlier. The blossoms resemble those of the wild hearts-ease, being quite small, and apparently never fully expanded. The casual obsever would scarcely know when it was in full bloom. Two crops are generally raised from one sowing, the sowing being in June or July, and the following spring the stubble is harrowed over, and a crop is obtained nearly as good as the first one. Where the seed was originally procured I could not learn. I procured four quarts for seed, and last summer sowed in July, the ground was very dry and it did not germinate for a long time. Finally it came up, but the early frost destroyed it except about a pint, which I succeeded in saving. Now, Messrs. Editors, can you give me any information concerning this buckwheat? Is it an old or new variety? Is it valuable or not? They told me there it was raised extensively for stock, requiring but little labor to raise a large number of bushels.

As buckwheat is not an exhaustive crop, and can be sown and reaped when other work is not pressing, it would be a valuable crop if it could be depended upon, which our common buckwheat cannot be, for if sown too early it blasts, and if too late, the frost takes it, and unfortunately there is no happy means of time that can be relied upon.

The oats raised in that section (Kings county, about sixty miles north-east of St. Johns,) are decidedly a better variety than ours, averaging 38 to 42 lbs. per bushel. This may perhaps be owing to the soil and climate. Potatoes do well with them, are generally planted in drills and covered with a plow, harrowed as soon as up, and afterwards cultivated and plowed, and finally plowed out, getting a good crop without much labor. Fruit of all kinds are almost a total failure. Numerous orchards have been set out but die in a short time. Land is worth four to six dollars per acre, and dear at that I think.

Newfane, N. Y. S. D. REDMAN.

How to keep Crows from Pulling Up Corn.—Take half a dozen eggs and take the white out. Put in a very little strichnine, and set the eggs around in the corn field. If they get it before they get any thing to eat in the morning, you will find them in the field. Stick a pole in the ground and hang up the dead crows. If they go off with the eggs *they won't come back again.* Three have been found lying dead beside one egg.—John Ayers, *Columbus, Mich.*

Speed of Carrier Pigeons.—It appears from a recent trial made at Bouges that carrier pigeons can still compete in speed with railways. Last week one hundred and forty-five pigeons were liberated at Bouges at five o'clock in the morning to decide a wager. One made the distance—three hundred and seventy-five miles—in less than eight hours, and another in less than nine.

Cleansing Old Pork Barrels.—After scrubbing, turn the barrels open end down, and keep a moderate smoke under them for half or a whole day.

Prize Essays.

ON THE CULTIVATION OF BROOM CORN.

BY F. F. H., EAST AURORA, N. Y.

THE cultivation of broom corn is a branch of agriculture in which very few are engaged, and which farmers generally very imperfectly understand, although the process is very simple, and the labor and care necessary to insure a crop are little greater than are required to grow a crop of Indian corn.

The best soil for its perfect growth is one that is rich, warm and loamy; but any land which will produce a good crop of Indian corn will grow broom corn. The Mohawk Valley and alluvial flats of the Genesee are admirably adapted to its growth. If the ground is not naturally dry and warm it should be made so by underdraining to insure a good crop. Good crops are grown upon the prairies of the West, but when grown upon newly-broken prairie, or other new land, the brush is brittle, and is not as valuable as that which is grown on old lands.

A clean clover sod turned under just before planting, or land upon which corn or potatoes were grown the previous year, will, if rich and dry, produce a good crop. A greensward turned over late in the fall is recommended by some, but unless it is land that has been thoroughly tilled, and is free from weeds, I should prefer turning it over just before planting.

Hog manure is perhaps the best that can be applied, but any manure that will increase the growth of Indian corn will be beneficial to broom corn. Leached ashes, applied at the rate of fifteen or twenty bushels per acre, will be found a valuable addition.

The ground should be plowed deep and thoroughly pulverized with the harrow, and roller if necessary. Then mark out about three feet one way and eighteen or twenty inches the other, if to be planted in hills. The proper time for planting, in Central and Western New York, is from the 10th to the 25th of May. Plant ten or fifteen kernels in a hill, and thin out to six or seven at the first hoeing. The seed should be covered from one to one and a half inches deep. A small handful of ashes to each hill, applied as soon as the young plants appear above ground, will be found beneficial, if the ground is not rich enough so as not to require such a top-dressing. As soon as the plants are all fairly up, run through with a cultivator and follow with a hand-hoe. The weeds must not be allowed to get the start of the plants at this stage of growth. When once started it grows rapidly, and it will not be necessary to hoe more than twice, unless the ground is weedy.

When the seed is one-half out of the milk, pass through between two rows and break down the whisk to a convenient hight for cutting—say from one and a half to two feet from the hurl. Let it stand a few days to ripen, and then cut off the brush so as to leave about six or seven inches of the stem, and place them in heaps at convenient distances through the field. These should be immediately collected into the wagon and taken to the barn, where the brush is sorted into handfuls, the brush of each handful being of equal length. Care should be taken not to expose it to the weather after cutting, as its value will be reduced one-third by an ordinary rain-storm. The seed may be taken off with a hetchel, made by placing upright knives close together and passing the brush between them; but this process can be adopted only where broom corn is raised in small quantities. A machine, driven by water, steam or horse-power, is used to separate the seed from the brush, where broom corn is extensively produced. The seed is very difficult to cure, and requires to be ripened by exposure in the sun, or kiln-dried. From twenty to thirty bushels to the acre is an average crop. It is worth as much as oats to feed to stock, but is very fickle as an article of commerce—bringing in market sometimes fifty cents and at other times four dollars per bushel. Some cut the brush as soon, or a little before, the seed gets into the milk: the brush will bring one cent per pound more, but the seed is nearly valueless. It is sometimes allowed to dry in the sun three or four days after it is cut, before being taken to the barn, and is then separated from the seed immediately; and sometimes it is taken in and placed on racks, or poles, so that the air will circulate through and dry it, and left until winter before the seed is taken off. In the latter case, care must be taken to keep out the rats and mice. The yield of brush varies from 600 to 1,200 pounds per acre, worth from five to ten cents per pound.

Broom corn is generally considered an exhausting crop; but if the brush is gathered while it is green, so as not to permit the seed to ripen, it is not as exhausting to the soil as Indian corn, and may be grown upon the same piece of land for successive years, with very little other manure than the stalks of the preceding season.

It has been said that a man who engages extensively in the growth of broom corn rarely, if ever, escapes failure. True, it is a very unstable product but I can see no reason why, with careful management, broom corn may not be made a profitable crop. Undoubtedly the man who engages in the business, without any knowledge of the process, and expects to get rich without any care or labor, will come out no better (if as well) as he would if he went into any other business in the same style. In seasons when there is little demand for the brush, it may be kept over without injury, until there is a rise in the price, if one has a place free from mice and dampness.

ON THE MANAGEMENT OF POULTRY.

BY MRS. M. S. B., AURORA, N. Y.

POULTRY we understand to mean ducks of the different species, geese, Guinea fowls, peacocks, turkeys, chickens, &c., in their different varieties. As the space devoted by the *Farmer* to the treatise on poultry is too small for the whole, I shall speak of the management of those most common.

Turkeys and Chickens.—There is as much difference in the management of these as there is in the management of children, with about the same results. There, observe the full-fed, self-satisfied, matronly look of that hen! She picks around for her own amusement—here a worm and there a bone, or charcoal, or broken oyster shell. And soon she is off to lay her accustomed egg, which, when done, is published to the world with strong lungs and good digestive organs. Then look on the other side of the picture: the poor, puny, pale-comb, of the ill-fed hen, one leg under her, while she has hardly strength to balance herself with the other. Into all kinds of mischief—the farmers' pest. We hear him exclaim—"I never see such hens in my life! We must change the breed! Here we have to buy eggs at twenty-five cents a dozen, and have ever so many hens!"

My good friend, the quickest way to change the breed, to get eggs, and have them to sell instead of to buy, is to feed your hens well with proper food, giving them a warm, cozy and comfortable home. This food should be alternated with corn, corn meal, with scalding water on it, oats, barley and buckwheat, with some raw or even cooked meat. Slaked lime, ashes and charcoal should be profusely spread around where poultry "most do congregate."

The good effects of this is easily understood, and it is in the use of these that chickens and turkeys do not get the gaps. Putting ashes at the bottom of nests, when poultry are set, under the straw, is an excellent antidote for this complaint.

The nests for laying or sitting should look, and be, comfortable: for hens, as well as turkeys, are quite particular as to the whereabouts they lay and sit. I have heard of hens that persisted in coming on the bed in the parlor to lay their eggs. Of course it was when feather beds were more fashionable there than pianos. And I have known them to fly in at a two-story window, with the help of a little shrubbery, to make their nest on a nice bed. Turkeys have the same propensity for dry, warm, curious nests, though they are not so domestic as the hen.

Then again behold the full-fed monarch of the yard! How haughtily he spreads his wings in the sun's rays, seeming to understand his nobility among his feathered wives, who, from their docile, happy looks, we presume never ventured to dispute his right of sway.

On the other hand, did you ever see a lean turkey? If not, I will not mar this page by describing one.

Turkeys need about the same kind of management as that of chickens in respect to food, &c., though I think turkeys require less care. I have seen the best results from feeding them near the house for two or three weeks, with equal quantities of corn meal and curd run from sour milk, and then leaving them to scratch for themselves—save once in a while looking after them with feed to keep them from straying too far away.

This kind of food (curd and a little meal) is the best food for young chickens, and even when older they prefer it to any other. They should not be kept too long in the coop, as their growth will be very much retarded, and they will be subject to many diseases. From two to three weeks I think long enough for them to remain in the coop.

Corn, with change of food, will fatten poultry; but they will fatten in much less time on corn, with boiling water poured over it, and some kernels of wheat scattered through it.

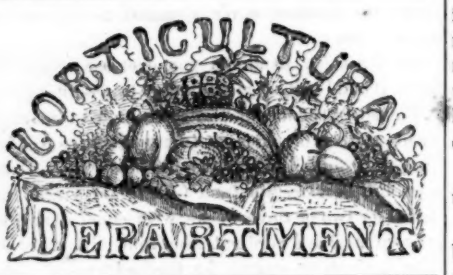
THE CULTIVATION OF WINTER AND SPRING BARLEY.

THE soil best adapted to the growth of barley is a light clay loam. Large crops can be grown on stiff clay soils when they are rightly cultivated. Winter barley may be sown on land that has been well summer fallowed. The soil should be well-pulverized before the seed is sown. Bones and farm-yard manure containing nitrogen are the best kinds to use. When beans are planted, after a clover sod, barley would do well after the bean crop. The bare ground should be plowed twice before the seed is sown, which should be about the middle of September. Two bushels of seed to the acre is sufficient.

Spring barley should be sown after corn, beans or turnips. The land should be prepared by plowing it in the fall, as the frost in winter pulverizes it and makes it more easily worked. Clay soils are most benefited by fall plowing. The land should either be plowed again in the spring or well cultivated. The seed should be sown as soon as the ground is in suitable order and the weather will permit. Subsoiling would be beneficial. It would keep the land more moist. Barley requires a moist soil, as it often suffers from drouth. After the seed has been sown the land should be rolled. It helps to keep the land moist and warm, and makes the seed come up quicker and more evenly.

If barley is not cut before it is ripe, it can be bound up at once. If it is not ripe it is better to lie in the swarth for a day or two. The sample is often spoiled by heavy rains, after it is cut, which makes it of a dark color. JAMES K. SMITH.

Morpeth, C. W., County of Kent.



GARDEN WORK FOR MARCH.

If the directions given in last month's *Farmer*, in regard to making and preparing hot-beds, were carried out, they are now in a proper condition to receive such seeds as it is desirable to start early in March.

I generally forward the following: Cabbage, cauliflower, celery, cucumbers, egg-plant, lettuce, melons, peppers and tomatoes. Some would add several other species, but I think the above are about all that it will pay to start in the hot-bed. Of course, those varieties of the different species which mature earliest in the open ground are the proper ones to sow in the hot-bed.

The following list comprises the earliest and best of well-tested varieties: Early York, Earliest Dwarf, and Early Savoy cabbage; Early Paris cauliflower; Early White Solid celery; Early Short Green, and Early White Spined cucumbers; Long Purple, and Improved New York Purple Egg-plant; Early White Forcing, and Early Curled Silesia lettuce; Fine White Japan, and Jenny Lind muskmelon; Early Mountain Sprout, and Goodwin's Imperial watermelon; Cherry, Long Cayenne, and Large Bell peppers; Large Smooth Red, Lester's Perfected, and Fejee Island tomatoes.

Nearly every year develops some new varieties of vegetables, but we must let amateurs experiment with them until their merits are well established before recommending them for general culture.

Sow all the above varieties, excepting cucumbers and melons, in rows about three inches apart, and when from one to two inches high, thin to three inches in the row. Thus you can raise, strong, stocky plants. Cucumbers and melons I would defer sowing until the middle of the month; otherwise they are liable to get too large before the weather will admit of their being transplanted.

I prepare for them in the fall by cutting pretty tough sods, six inches square by four inches thick, and when I prepare the hot-bed I place them, inverted, directly on the manure, with a stick in the center of each sod as guide in transplanting, and sow upon each one about a dozen seeds, covering them with fine loam to the depth of three-quarters of an inch. When the plants are well started, thin to four in a sod. Managed in this way, cucumbers and melons can be transplanted, even when in blossom, without being retarded much in their growth. I have had cucumbers in this way before the Fourth of July, in the vicinity of Rochester.

Celery plants will do best in the more shaded portions of the hot-bed, with a pretty damp soil.

The best methods of transplanting from the hot-bed into the open ground, we will consider in the appropriate season.

In the latter part of the month, many of the readers of the *Farmer* will want to commence out-door gardening. There is nothing gained by being in too much of a hurry, as the texture of the soil is injured by digging it while wet. But in some seasons the ground in New York State is as dry, and in as good condition for working the latter part of March, as at any time in April, and in such a case the enterprising gardener will "take time by the forelock."

The first thing in successful gardening, is to put the soil in a proper condition for a deep, mellow, rich seed-bed. The manure question was briefly considered in the February number. To make the soil deep and mellow either sub-soiling or trenching should be resorted to. Trenching is the more thorough and effective way, but sub-soiling, if rightly done, is much better than mere surface plowing. In either case the surface-soil should be retained upon the surface, and the subsoil merely broken up.

If, when the ground is prepared, it is still cold, it is better to defer sowing the seeds a few days until it warms up some, as they can not germinate in a cold bed, and the ground will warm quicker, if left rough, than if raked off in a proper condition for planting. When the ground is in proper condition, rake it off thoroughly with the garden rake, breaking up all lumps, and removing stones and rubbish. Use the line in commencing the drills, and draw the drills straight. Thus your work will look neat, and you will be proud of your garden.

Onions, peas, spinach, lettuce, raddish, carrots and turnips are the first crops to sow.

Onions—Large Red, Yellow Dutch and White Portugal are the best varieties of black-seed onions, and Potato and Red-top where bulbs and tops are used. Black-seed onions should be sown in shallow drills, eleven inches apart, and the ground well rolled or trodden down. Potato onions require drills fifteen inches apart, and deep enough to just cover the bulbs; or the better way is to make shallow drills, and press the bulbs into the earth just below the surface. They should be set eight inches apart.

Tops should be set in the same way, but not pressed in so deep.

Peas—The best for early crop is Daniel O'Rourke and Tom Thumb*. The former grows two and a half feet high, and should be sown in drills three feet apart and two and a half inches deep. The latter grows eight inches high, and the rows may be fifteen inches apart. A little poudrette or bone-dust strewed in the drills starts the peas finely.

Spinach—The Round-leaved is the sort. Should be sown fifteen inches apart and thinned to six inches.

Lettuce—Early Curled Silesia, Butter, and Ice-Cream are the better sorts for early crop. Drills should be shallow, eleven inches apart, and plants thinned to six inches.

Radishes—Early Scarlet Turnip and Long Scarlet Short-top are the best early varieties. They like a light, sandy soil, warmed up with manure.

Carrots—The Early Horn is the carrot for early crop, and should be slightly covered in drills eleven inches apart.

Turnips—Early Dutch and Red-top Strap-leaf are the best early turnips. Should be sown in rich ground, or they will be tough and stringy.

These comprise about all the garden crops that it is advisable to sow in March—even where the weather is very fine—as other kinds would be likely to be killed by April frosts, if they should come up.

R.

WILL PEARS SUCCEED ON SANDY SOILS?

EDS. GENESEE FARMER: It seems to be quite a prevalent opinion that pears will not succeed well on a sandy soil, and many persons having only soils of this description are detered from planting the pears to any extent, on account of such opinions expressed by eminent American writers—more especially Mr. Downing, who says: "Strong loams, by which we mean a loam with only just a sufficient portion of sand to make it easily worked, are, on the whole, by far the best for fruit gardens in the country. * * For a few years the growth and productiveness of the trees upon sandy soil is all that can be desired; but the trees are shorter lived, and sooner fall into decay, than when the soil is stronger." In the above opinions you seem to concur by quoting largely from Downing in the *Rural Annual* for 1860, on this subject. Now I have not sufficient experience or confidence to dispute the above, but for the encouragement of those who have only sandy soils, I would say that Mr. Barry and Mr. Thomas, both good authority, though preferring the soil with *some* clay, are much more moderate in their demands. Thomas says, "Good soils vary in many particulars, but as a general rule, one which is dry, firm, mellow and fertile, is well suited to the cultivation of fruit trees." Space forbids my quoting from other American and foreign writers—expressing very nearly the opinions above expressed by Thomas.

T. W. Fields (American), who certainly speaks like a man of experience and judgement, says in his *Pear Culture*, page 42: "Mr. Downing certainly made a great mistake when, in writing a description of soils suitable for the pear, he pronounced a sandy loam unfitted for the permanent growth of the tree. Two or three hours ride through the western end of Long Island would have convinced him that there were, in that locality, more pear trees from fifty to a hundred years old, than in all the rest of the United States," and mentions three pear trees in the city of Brooklyn that measure respectively, 9, 10 1-2 and 11 feet in circumference, and estimated to be no less than 150 years old. Again, on pages 40 and 41, he says: "The winter blight of the pear has never been known on the rich but light soils of New Jersey and Long Island, which seem peculiarly adapted to the growth, productiveness and longevity of the pear, while the winter of 1855 destroyed many pear trees on the strong soils of the counties of Central New York."

And now, my friends—readers of the *Genesee Farmer*, who, like me, lack experience in pear culture, and have only sandy soils—let us take courage, and plant pears; always remembering that all agree in one thing: that the soil must be dry, deep, mellow and rich, and kept so—more especially for dwarfs.

Of the plum Mr. Barry says: "It succeeds best, as a general thing, on a clayey loam, rather stiff." Without disputing so good authority, I would say, by way of encouragement, that plums have rarely, if ever, succeeded better than on the sandy soils of Western Michigan, so far as bearing qualities and healthiness are concerned; but as to their longevity we can say but little—our country being too new.

Muskegon, Mich., Feb., 1864. S. B. P.

A CORRESPONDENT of the *London Cottage Gardener* complains that his late fall pears spot badly, and the editor advises him to raise the trees and add a large quantity of stones to the soil in which they are planted, and adds: "At the same time it must be borne in mind that the evil in most, if not all, cases arises from the roots, and to remedy that by laying the roots more dry will be one of the most likely means to effect a cure; and if the trees are not luxuriant we should manure the surface of the soil in early spring, and keep it mulched throughout the summer."

IT seems to be the general opinion among the most experienced fruit-growers of the West that apple trees should be trained low, in order to protect the trunk from the rays of the sun.

*Tom Thumb is valuable from its exceedingly dwarf habit, but the quality of the pea is decidedly inferior.—EDS.

THE INFLUENCE OF SOIL ON FRUIT TREES.

This subject was discussed at a late meeting of the Fruit Growers' Club in New York. Dr. Ward, of Newark, who is a fruit-grower of much experience, said that if nursery trees are stunted for want of sufficient pabulum, no matter what the after-treatment or soil, they never recover in the orchard, and this faulty development of organs in the young plant may account for the degenerate condition of many trees, much more than a change of soil. "I consider it," he said, "just as important that a young plant should be fed suitable, nutritious, rich food, as a stock-breeder does that his young animals should be treated in the same way. Indeed, there is a great analogy between plants and animals; both are developed by a similar process of nutriment and growth, and when this development is healthy, both become vigorous, and take on the most perfect form. I would, in buying trees, look more to this than to what was the character of the nursery soil, because that can be made suitable, whether naturally heavy or light. Perhaps the most suitable soil for trees, is a medium or loamy soil, which, for a nursery, must undergo a most thorough manipulation and enrichment. The soil should be naturally one that does not suffer from drouth, because that gives a fatal check to growth, and it must be so thoroughly drained that water will not stagnate within reach of the roots.

Solon Robinson—If the theory of analogy between the growth of plants and animals is correct, as I believe it is, then the nurseryman should not only adopt and pursue the same course that the stock-breeder does in giving the young plants nutritious food, so as to produce rapid growth and great vigor, but he should follow up the analogy and look to the seed that is to produce the trees, to be sure that it comes from perfect fruit, sound and healthy, in a fit condition to propagate its species. No stock-raiser would think of using a sickly, miserable, stunted animal, male or female, to produce a thrifty, healthy offspring; and I have no doubt about the fact that some, at least, of the diseased, stunted, good-for-nothing trees, which can not be coaxed to grow and produce good fruit, owe their worthlessness more to their parentage than to their cultivation, or to the kind of soil in which they are grown, or to any violence done them in changing from one kind of soil to another. We all know, in regard to apple trees, that the seeds are usually produced from the pomace of a cider-mill, and embrace those of immature and diseased fruit, as well as those that come from apples perfectly ripened and of good quality. In cutting scions for grafts, the kind of fruit is only looked after—not the healthiness of the tree. Now, if the stock is grown from the seed of a diseased tree, or immature fruit, and the scion is cut from a diseased tree, is it any more reasonable to expect a healthy offspring in this case, than it would be for the stock-raiser to expect healthy offspring from parents that were notoriously unfit to propagate their species? If this view is correct, a radical reform is needed in the production of all of our fruit trees. In confirmation of this theory, I have noticed that those who undertake to produce new varieties by growing seedlings are very careful to select their seed from the very finest specimens of fruit that they can obtain; and some of them contend that it is of great advantage to plant the seed in the pulp of such fruit as peaches, or at least never allow the seeds to become dry. That is, in looking for the proper season to plant, follow nature's guide. In selecting seed follow the course of those who produce the most highly-developed animals. Follow their course also in the care and food of the young trees. Adapt each to the most suitable soil, and give them rich food and tender care, with shelter from blasting winds, and there will be very little occasion to complain about trees not doing well because the orchard soil is different from that of the nursery.

Dr. Ward—I indorse all this. Everything depends on the starting point, in plant, as well as animal life. Disease of parents often exhibits itself in offspring. Consumption is thus transmissible. The common disease of peach trees, indicated by the yellows, it is well ascertained is transmissible in seeds and scions. We must study and understand better vegetable physiology. Then we shall be more careful about seed. We are too apt to forget that the first life of the plant receives all its nutriment from the substance of the seed. That is one of the reasons why it is thought that the best time to plant the seed that is to produce the tree is just when the fruit is perfectly ripe. The seed and earth, nature declares, are then in the most suitable condition. Who knows how much the future usefulness of the tree is injured by the first check its growth receives in injury to the seed. We know that seeds sometimes have barely enough vitality to start the germ into life.

This is rather a new doctrine. In one of the late volumes of the *Genesee Farmer* the question as to the "Cause of the failure of so many fruit trees sent out by nurserymen" was very fully discussed by correspondents in different sections of the country, and the generality of them attributed it, first, to a want of necessary preparation of the ground and the neglect of the trees after they were planted; and secondly, to the fact that trees in the nursery were usually grown on *much richer soil* and received higher culture than farmers could give them. Dr. Ward's opinion seems to be directly opposed to this view. The truth probably lies between the two ex-

tremes. We do not think there is any strict analogy between plants and animals; but to carry out the illustration of Solon Robinson, we may remark that, while it is true that animals rarely recover from the effects of a deficiency of food and exposure while young, it is equally true that young animals over-fed and stimulated excessively are not as likely to thrive afterwards, under the ordinary treatment of the farm, as those not so pampered. So trees, stimulated excessively in the nursery, are not as likely to do as well, when removed to ordinary soil, as those of more moderate growth. As long as there is such a demand for large trees, we think the tendency will be to stimulate the young trees too much in the nursery, rather than to stunt them by poor cultivation. If, however, the wood of the trees is thoroughly matured, we do not see why a vigorous growth in the nursery should prove injurious to the future health of the trees.

In the discussion that followed, Mr. Wm. S. Carpenter well remarked:

I have planted a good many trees, from various localities and different soils, but care less for that than I do for the way the trees are grown in the nursery. I would reject those that appeared stunted, and those, however thrifty, that were grown so closely that they had not been able to throw out any side branches. I do not want whip-stalks, nor fruit trees grown like willow wands. In nursery or orchard, if the soil is not well-worked, the trees will fail. They will suffer most in heavy soil. In buying nursery trees, it is a good sign to judge of their value, to see that a number of stout limbs have been trimmed off when packing for transportation.

Thomas G. Field—As a grower of trees I concede this truth, but we are not allowed to grow such trees. Customers measure their value by their hight. A low, compactly grown tree, with stout side branches, would not be a saleable one.

Mr. Carpenter said that they would be saleable to any one who had ever planted an orchard of both sorts, for he would then know that the long slender stalks were not what he wanted. As to the soil of the nursery, he did not consider it important what its character was if well prepared. For an orchard, the soil must be made light and dry. As to the theory of looking to a healthy source of the seed for the trees, he could not quite agree with it.

Dr. Ward said that he would defy the gentleman to produce healthy peach trees from seed grown upon trees that had the yellows.

Dr. Trimble—Most of the peaches sold in this city come from such trees, and the young trees grown in the nurseries come from seeds gathered in the streets, and thus the disease is spread everywhere. I was in an orchard the past season of 130 acres, that would yield 30,000 baskets of fruit. In three years all these trees will be dead, and the proprietor would not have another orchard planted upon the same land as a gift, because the trees would die before they gave a crop, and one good crop is all that is looked for, such is the diseased condition of the trees.

Mr. Carpenter insisted that the yellows in peach trees were the product of an exhausted soil.

Solon Robinson inquired how it happened, then, that the disease was found upon the richest virgin soil in the world—on the prairies and bottom lands of the West?

Thomas J. Field—Then they die of excess of richness as well as of poverty. The yellows upon peach trees show that the tree is diseased, just as the black leaves upon pear trees show disease, and it is not traceable in either case to a defect in soil or culture. As to effect of soil, and change from one sort to another, I would prefer the nursery soil to be of moderate richness, as they do sometimes grow too rapid and with roots too long upon very deep, rich soil. I think that there is a disadvantage to trees grown in a sandy nursery, if planted out in an orchard upon a clay soil. All trees become, in a measure, habituated to a particular kind of soil.

FRUITS IN JAPAN.

Mr. Thomas Hogg, who is now in Japan, writes as follows to the *Horticulturist:*

"The past spring and summer have afforded me an excellent opportunity of tasting the fruits in their season. The first that makes its appearance is the fruit of a species of Rubus, apparently more nearly allied to the blackberry than the raspberry. It is of a light yellow color, small in size, with rather soft flesh. The flavor is peculiar, and somewhat insipid, but, eaten with sugar, becomes tolerable enough, and quite equal to some berries at home with high-sounding names that require plenty of the same material to render them palatable.

"In the month of June, apricots come in, and for two or three weeks are very abundant and cheap. There are several varieties, but all small, and about as deficient in flavor as early apricots are apt to be elsewhere.

"Before apricots are entirely gone the fruit of the Mespilus Japonica is brought into market. It is a favorite fruit with the Japanese, and large quantities are brought in daily. When ripe they are very juicy, and have a pleasant sub-acid flavor, that may be compared to a fine ripe harvest apple. Their size, when in perfection, is about that of a medium sized gooseberry. Towards the latter end of their season they become smaller, owing, probably, to the overbearing of the trees.

"Following these come plums, which remain in abundance several weeks. Of these, the variety is greater than of apricots, and some of them equal in size and flavor to those brought into the markets of New York. None, perhaps, equal the Green Gages, or Golden Drops, and other first-rate sorts, but quite so to some classed as desirable second-rate plums.

"Somewhat reverse to the order with you, peaches succeed plums. Although of fair size and appearance, they are inferior in flavor. This may be partly attributed to the practice of picking all their fruits in a very green state. No fruit suffers more from this treatment than the peach; yet it would hardly be possible, owing to the tenderness of their flesh, to bring them to market as they should be eaten, ripe from the tree. They are now (September 8) nearly gone, and have become almost worthless from the injury done them by an insect of the curculio (?) kind, that stings the fruit and deposits its larvæ as does the curculio.

"Muskmelons and watermelons have also been abundant. The former are very inferior, and would not be tolerated on your table; the latter are fair, and would be better, only for premature picking.

"Grapes and persimmons are now making their appearance. The latter, next to the grapes, are, in my opinion, the best fruit we have; they certainly are the peculiar fruit of the country, and take the place of apples in our own. Whether they would answer to make pies I do not know; but as the Japanese do not indulge in that home luxury, it does not enter into the estimate of their value.

"I had almost forgotten to include apples in the lists of fruits brought to market. Not many are brought in, and their season is soon over. They are a very small, early variety, and when eaten just at the right time are very passable. Pears, too, are now coming in; those hard, granular, indigestible things you have seen, called the Chinese sand pear. As an ornamental tree it has its uses, but as a fruit it can not be recommended. Large quantities of them are consumed by the people. Different sorts are cultivated, one of which keeps all through the winter and spring following.

"Until the present season, nothing has been done by foreigners for the introduction of finer fruits (except the strawberry) into the country.

"Last spring, Frank Hall, Esq., and Col. George S. Fisher, U. S. Consul, both made importations of trees from California. Between them quite an assortment of the best varieties of cherries, plums and pears has been introduced, and are now growing finely in their gardens. Their peach trees, grape vines, and a few minor fruits, unfortunately did not do as well. Others, no doubt, will be induced by their success to follow their example, and the best results, by means of private enterprises like these, may be fairly expected, and the introduction of choice fruits create new desires, and lend their aid in civilizing a barbarous people."

SPOTTING AND CRACKING OF THE PEAR.

In a recent number of the *London Gardeners' Chronicle* the Rev. M. J. Berkeley, the well-known cryptogamic botanist, says:

"Almost every one complains that in spite of the late dry and warm summer, which was so favorable to the ripening of the wood, and which promises such a plentiful and strong blossom in the spring, pears have kept very badly. Some have prematurely bletted, others have gone rapidly to decay, while many have been spotted all over, so as to be unpresentable. For the greater part of an abundant crop of Glou Morceau from our own garden are in the latter condition. Under each dark spot there is a brown dry mass of tissue of a greater or less depth, without any tendency to run into a state of moist decay, and extremely analogous to the dry form of the potato murrain. These spots have in the first instance undoubtedly originated in the growth beneath the real cuticle, of a minute brown parasitic fungus, Cladosporium dendriticum, which has destroyed the vitality of the subjacent tissue, but has not sufficient vigor of growth or greediness of moisture to make it penetrate deeply into the fruit. Where moist decay has supervened, it is apparently due to other fungi which have accompanied or replaced the Cladosporium. This mold has of late years been a dreadful pest both to pears and apples, in some cases being virulent enough to destroy or greatly impair the young shoots, and its growth beneath the cuticle makes it almost impossible to apply a remedy. After a time, indeed, the cuticle bursts, to allow the fertile threads to break out into the air and bear fruit, but the mischief is then already done, and it is notorious that even were the habit different, dark-threaded fungi are far less destructible than those which are colorless. There is no reason to suppose that the fungus is a new visitant, as some kinds of apples, the Golden Pippin for example, have always been subject to this spotting. Unless, however, we are mistaken, it is far more prevalent than it was some thirty years ago, and the discovery of an effectual remedy would be a great benefit to the horticulturist."

Lime Wash for the Curculio.—A. S. Miller, of Rockford, Ill., says he succeeds in keeping the curculio from his plum trees by syringing them thoroughly with thin whitewash, say a peck of lime to half a barrel of water. He does this on the fall of the blossoms and as soon as the young plums appear. He formerly dusted his trees with lime, but thinks it better to apply it in the liquid form.

THE BEST TIME TO PRUNE.

Eds. Genesee Farmer: You say in the present number of the *Genesee Farmer* that February is the time to trim orchards. Permit me to say to you in reply, that May is the best time for trimming fruit trees of all kinds. I can saw off limbs from two to three inches through in May, at the time they begin to blossom or leaf-out, and they will grow over entirely smooth and sound in three or four years. You cut off limbs of the same size in February, and sap will ooze out of the stump until the last of April, the stump will rot and the woodpeckers will dig them out and build nests in them, and they never will grow over. Lyman Balcom.

Painted Post, N. Y., February, 1864.

It may be that it is better to prune old apple orchards as late in the spring as our esteemed correspondent recommends; but we think that ordinary pruning should be done earlier. We would prune both apple and pear trees as soon as all danger of severe frosts was over.

Barry, in his *Fruit Garden*, says:

"The climate, the nature of the species, &c., control the period of pruning to a great extent. In the South, what we term the winter pruning—that performed during the dormant season—may be done very soon after the fall of the leaf. In the North, it is deferred to February, March, and even April. In Western New York, we prune apples, pears, and other hardy fruits, as soon as our severe frosts are over—say the latter end of February and beginning of March. If pruned sooner, the ends of the shoots are liable to be injured, and the terminal bud so weakened as not to fulfil its purposes. Besides, the wounds do not heal well.

"The peach we prune just as the buds begin to swell. The fruit and leaf buds are then easily distinguished from one another, and the objects of the pruning are accomplished with more precision.

"Grapes may be pruned any time in the winter, as a portion of the wood is always left above the bud. Gooseberries and currants also, any time in winter. The stone fruits should always be lightly pruned, because severe amputations almost invariably produce the gum. Where it is absolutely necessary in the spring, the wound should be coated with grafting composition, or with that recommended by Mr. Downing: 'Alcohol, with sufficient gum shellac dissolved in it to make a liquid of the consistence of paint, to be put on with a brush.' This excludes air, and is not affected by changes of weather."

Five pears were recently sent from California to New York which weighed 13 1-2 pounds. The largest one weighed 3 1-2 pounds. On tasting it—not eating it—it was found, says the *Tribune*, to be possessed of as little of the flavor of a good pear as it would had it been manufactured of corn meal and sweet apple juice. "It was as unlike a pear as the little russet apples that we see in June are unlike a good apple, or as unlike as a shaddock is to an orange."

The Coleus Verschaffelti is being highly recommended by all English growers as a bedding-out plant. It is quite easily cultivated, and has the advantage of being new. It can be grown from seeds quite readily.

LIMING APPLE ORCHARDS.

A farmer in Doylestown, Penn., states that lime has a very injurious effect on apple orchards. He says: "In the spring of 1841 I moved (with my father) to a farm in Plumstead township. The orchard on this farm had been recently limed; the trees, though young, showed symptoms of decay; many of the smaller limbs were dead and decaying. The fruit in the fall was imperfect and dry, and full of pithy spots; when an apple was cut transversely these spots had a yellowish appearance. I was several years in forming a judgment of the cause of these spots and the dryness of the apple. The second year the fruit was less affected with these spots; the fall following, still less so. In the spring of 1844 I moved to a farm I had rented, in Buckingham township, where I remained three years, and then returned to the farm in Plumstead again, where I staid two years more. I found the apples much improved and improving in these five years. I therefore concluded that it was the effect of the lime. In the spring of 1859 I again moved to another farm in Buckingham. On this farm there was a small young orchard. This orchard was rented by another person, who informed me some time during the winter that the apples from this orchard were not keeping well, and were imperfect and affected with such spots as I have spoken of before; the year previous they had kept well and were very fair. I felt fully satisfied from this information and previous observations that the ground must have been limed between the gathering of the two crops, and when I informed him of my suspicions he confirmed them by admitting that he had limed it that spring, and had suspected the lime to be the cause. I also know of another orchard in the same neighborhood affected in the same way by an application of lime, the fruit being almost worthless for several years, and the trees much injured."

We should be glad to receive more information on this subject. We are by no means satisfied that the lime was the cause of the specks on the fruit. It is more reasonable to attribute them to negligent cultivation previous to the application of the lime, and the fact that in a few years afterwards the trees were more thrifty and healthy would favor this supposition. The action of lime is slow. It decomposes and desintegrates the organic and mineral matter of the soil, and this is not accomplished at once. We should not look for any benefit from the application of lime to an orchard the first year.

Japanese Plants.—At the sale of plants brought from Japan by Robert Fortune, which recently took place at Covent Garden, London, 628 lots were offered, and sold for over $3,000. Plants of the true Aucuba Japonica, from two to three feet high, brought from $35 to $45 each.

Ladies' Department.

We see in a weekly agricultural paper quite a severe criticism of three, or properly two, of our receipts—one for "Queen Esther's Bread," and the other for "Chicken Salad," with the dressing. The first is condemned as manifestly absurd, and the second as so vague as to be useless. In the last the dressing was the main point, and it was sent to us by a housekeeper of experience, who said it was excellent. If our critic is a lady, we hope that she will try them both and then give us the result, as we have great confidence in the source from which they came. We take great pains to have our receipts really good, and never admit one that does not come to us with the recommendation of some experienced person. Many who have tried them say that the "*Genesee Farmer* receipts are never known to fail." We should be very glad if our lady readers would add to the interest of their department by sending us any *choice* receipts that they may have.

The *Germantown Telegraph* has the following receipts which, as they require no eggs and very little butter, commend themselves to all in these times of high prices:

Wedding Cake Pudding.—Four cups of flour, a half cup of butter, teaspoonful of soda, one cup of molasses, one cup of currants or raisins, a teaspoonful of salt. Steam it three hours. *Sauce:* A half cup of butter, one cup of sugar beaten to a cream, one egg well beaten, one glass of wine, a wine-glass of boiling water. Steam five minutes.

Cider Pudding.—Two pounds of flour, two teacupsful of suet chopped fine, a cupful of raisins or currants. Mix well with cider until it is a stiff batter. Boil two hours. This will be found equal to plum pudding.

A Help-Mate Indeed.—A Columbus (Ohio) correspondent of the Cincinnati *Gazette* writes: "Dr. Wormly, Professor of Chemistry in the Medical College in this city, has been for some years experimenting on the effects of the different poisons upon animal life. For this purpose he has killed several hundred cats and dogs (sheep-growers take notice,) with poisons, and by analyzing their blood and stomachs has determined the exact appearance of the poison crystals after doing the work of death. The greatest difficulty he has encountered in this investigation has been to get these appearances of the crystals perfectly represented on paper. To overcome this difficulty his wife, daughter of John L. Gill, of this city, came to his assistance, and made perfect sketches of the poison crystals, as the Doctor, by chemical analysis, brought them to view. This done, his next trouble was to get the sketches transferred to steel plates. For this purpose he called upon the most distinguished engravers of Eastern cities, who told him that it could not be done short of three years' time, and almost a fortune of money. One of them engraved a single page, but the Professor was not satisfied with the job. His wife again came to his relief, and taking up the art of engraving, very speedily mastered it, and in ten months presented the author of the forthcoming book on poisons with the whole series of plates, the delicate touches of which defy criticism even under the scrutiny of a microscope."

FASHIONS.

As it is necessary to dress, it is better to do it well than ill, and changes are sometimes very pleasant. Bonnets are very nearly the same, except that there is a change in the cape. It is almost a complete horse-shoe, measuring at the back five inches and at the sides three and a half. This allows for a tiny frill at the top, and two very shallow plaits at the back. *Godey* says: "We can answer for the set and style of this cape—always the most difficult part of a bonnet to arrange."

Small nets are now made for waterfalls, which are very convenient. They are made of the finest silk, and are almost invisible. With one of these anyone can arrange a waterfall, as the slight shading which it gives conceals all defects. Plaid nets are also worn, highly trimmed with ribbons, and in some cases with flowers. White nets of coarse cotton or bobbin are used for night-caps, drawn up with a bright-colored worsted braid, which keeps the net in its place better than ribbon. They are much nicer than night-caps, as, while keeping the hair in order, the head is not too warm.

Plaid dresses and cloaks are more stylish than ever in Paris. The French journals admit that there is absolutely nothing but plaid—plaid dresses, plaid bonnets, plaid cloaks, and plaid parasols trimmed with plaid ribbons and plaid fringes.

Veils are much worn drawn tightly over the face. The new shape is nearly round, and is suited to this style. If the old ones are worn, they must be closely wound around the elastic at the sides.

A string or double string of large black beads round the neck over the sacque or cloak is quite in favor. They are graduated in size—the largest about the size of a marble. Imitation jet is generally used, as the fashion will be a short-lived one, and the real is too expensive. Dresses are worn so constantly looped up over the under skirt, that it has now become quite the custom to trim the latter very handsomely and leave the other plain. Serge dresses and skirts alike are quite in vogue, but they are very heavy. Alpaca will take their place as summer approaches. Every kind of trimming appropriate to the dress-skirt is now put on the under skirts. When they are not like the dress, the black and white striped balmoral trimmed with a wide black velvet, the velvet braided with white, is the most stylish. Some balmorals are striped with bright colored silk or enriched with silk designs run through them. Very high balmoral boots or boots laced up just above the ankle with the new style of anklets are used altogether. They have little tassels at the top, and have a very pretty effect.

Double-Heeling Stockings.—Miss S. R. Bowman remarks on this subject as follows: "Soldiers very soon walk through the heels of their stockings. Now if the good ladies who knit so much will only make fine *double* heels, in the following manner, 'the boys' will probably foot up a victory in 'double quick:' Take two balls of yarn, and on the right side knit one stitch with one thread, and the next with the other, and so on across the needle. This alternately makes a loop on the inside, which renders the heel very thick and durable, without making it any wider. On the wrong side, take both threads together, and knit as one, in the usual way."

Miscellaneous.

THE FARMER LAD.

It was a wild and wayward maid,
Of budding seventeen,
With laughing lip and roguish glance
As eye hath ever seen.
And "no pale city beau," she said,
"Shall aye my true love be;
If ever wedded wife am I,
A farmer lad for me!

"I met a lad, a sonsy lad,
Among the new-mown hay;
His manly cheek had won a glow
From rosy dawn of day;
And he was tall, and straight, and strong,
And stately as a tree;
His limbs were like the sturdy oak's—
The farmer lad for me!

"Oh! he the snow-white fleece can shear;
With sweeping strokes can mow;
In busy March, when winds blow dry,
With even hand can sow.
And none can guide the plow so fair
Along the stubborn lea,
Or load the winnowed grain like him—
The farmer lad for me!

"The city beau with dainty hands,
May smooth his scented hair;
The city beau with gliding tongue
May flatter lady fair.
My lad less polished mein may show—
As true his heart may be—
He's but an honest farmer lad,
But he's the lad for me!"

DOUBLE-CHARGED.—A good story is told of one George Shaffer, who, many years ago, lived at Portsmouth. He had once been out shooting, and was coming home with his game-bag empty and weary, when he stopped at the toll-house for a moment's rest. "There's a fine lot of ducks back here in the pond," said he to the toll-keeper. "What will you let me fire into them for?" Can't do it," responded the toll-keeper; "I don't want to have my ducks killed." George put his gun in the toll-house, and walked back to take another look at the ducks. When he was gone, the toll-man, who was a wag, drew the shot from the barrel, and then replaced the gun. George returned, and renewed the question. "Well," said the toll-man, "though you are a good shot, I don't believe you can hurt them much. Give me your money, and you may fire." The money was paid, and quite a party, who had gathered round, went back to witness George's discomfiture. He raised his gun, fired and killed nine of them. "Bless me!" cried the toll-man; I took the charge out of your gun." "Yes," said George, "I supposed you would. I always go double-charged."

A SALT-WATER LORD CHANCELLOR.—A pleasant story is told of a conversation between two sailors who saw the Lord High Chancellor of Great Britain climbing up the side of his yacht in a marine jacket and trousers. "I think, Jack," said the sailor, as he turned a knowing look to his messmate, "this is the first time one ever saw a *short Chancery suit*."—*Court Journal.*

"GRANDMA," said an intelligent but crafty child, "do you want some candy?" "Yes, dear, I should like some." "Then go to the shop and buy me some, and I will give you a part."

THE first suggestion of Thackeray's opinions on the Georges, appeared in *Punch* several years before the delivery of the lectures. It was at the time their statues were prepared for the new parliament palace. "We have been favored," said the periodical, "by a young lady connected with the Court, with copies of the inscriptions which are to be engraven under the images of those Stars of Brunswick." They were all sufficiently satirical; but the severity lay in the truth. The first and the last were the most pointed. This was for

GEORGE THE FIRST—STAR OF BRUNSWICK.

He preferred Hanover to England.
He preferred two hideous Mistresses to a beautiful and innocent Wife.
He hated Arts and despised Literature;
But He liked train-oil in his salads,
And gave an enlightened patronage to bad oysters,
And he had Walpole as a Minister:
Consistent in his Preference for every kind of Corruption.

The inscription for George IV is one of the most pointed satires of its class ever written:

GEORGIUS ULTIMUS.

He left an example for age and for youth to avoid,
He never acted well by Man or Woman,
And was as false to his Mistress as to his Wife.
He deserted his Friends and his Principles.
He was so ignorant that he could scarcely spell;
But he had some skill in Cutting out Coats,
And an undeniable Taste for Cookery.
He built the Palaces of Brighton and Buckingham,
And for these qualities and Proofs of Genius,
An admiring Aristocracy
Christened him the "First Gentleman in Europe."
Friends, respect the KING whose Statue is here,
And the generous Aristocracy who admired him.

THE following letter has been received by the Principal of of a public school in England, in reply to a circular asking the opinion of the parents upon the practice of flogging:

"DEAR SIR: Your flonging sirklar is duly reccaved, I hopes as to my sun John you will flog him jus so often as you like. Hees a bad boy is John. Althauth I've been in the habit of teeching him miself, it seems to me he will larn nothing—his spellin is speshall ottragusly deficient. Wallup him well, Sur, and you will receive my hearty thanks.—Yours, Moses Walker. P. S.—Wat accounts for John being sich a bad scollar is that he's my sun by my wife's first husband."

A SINGULAR method was employed by the wits of a certain epoch to eke out their intellectual store; not only did they put their good things into verse, but they cast about for some place to write them in or upon, which should be itself significant, as thus:

[Written on a looking-glass.]
I change, and so do women too;
But I reflect—which women never do.

To which a lady is said to have replied:

If woman reflected, O scribbler, declare
What man—faithless man—would be blessed by the fair.

HOW TO GET RID OF TROUBLE.—"To shake off trouble," said Howard, the great Philanthropist, "we must set about doing good to somebody; put on your hat and go and visit the poor; inquire into their wants, and administer unto them; seek out the desolate and oppressed, and tell them of the consolation of religion. I have often tried this, and found it the best medicine for a heavy heart."

A DEBATING CLUB in Worcester lately discussed the important question: "Whether a rooster's knowledge of daybreak is the result of observation or instinct."

Notes on the Weather from January 15th to February 15th, 1864.

The last half of January was as much warmer as the first half was colder, so that the mean was 25.6° for the month, while 25.7° was the average for 28th January. The noon of the 28th was 56°, and the cold of the 21st was 9°—the extremes of the last half. In January, 1857, the coldest last half known here was 15°, and this year was 32.6° for the last half. Rather pleasant two weeks. The water was 2.91 inches. Barometer low, the mean being 29.19.

The sleighing had been good for several days, but left us on the 24th. The wheeling then good.

On the 20th and 21st a slight ice shower was on the trees and shrubs, so as to show many diamonds and some fine prismatic colors.

The mean temperature and other results for 1863 were given in the last *Farmer*. The *Times*, of London, gives the average heat there for 1863 as 49.4°, and for the last fifty-three years as 48.5°; the greatest heat of the six years, 92.2°, in June, 1858, and the coldest in December, 1859, as 7° below zero. The morning of January 2d was below cypher here, when at London it was 29°. Since 1843 the greatest cold at London was 8° below.

Though we have much of the abounding rainy weather in Southern England, much less rain falls there in a year than here. There the rain for 1863 was 13 inches—very small—but here it was 30 inches. There the average rain is 24 or 25 inches—here it is 32 inches; and there the monthly average rain for twenty years past is: for January, 1.9; February, 1.4; March, 1.4; April, 1.8; May, 2.0; June, 2.6; July, 2.4; August, 3.0; September, 2.6; October, 2.7; November, 2.0; and December 1.9 inches;—25.7 inches. In 1860 the rain there was 32.5 inches; 1858 was 18.9 inches.

February.—The first half has been warm, and its mean is 30.1°, while the general average is 26.2°—a difference of 4°. Last year it was 3° below the average. In 1855 the mean for this half was 14.8°, and 14.5° in 1856. No snow for sleighing in this half; sleighing in Niagara county for a few days. Rather pleasant weather.

The mean of barometer was 29.19, which is low. Little water fallen—only 0.51 inch.

The buds of the peach trees are said to be injured by the cold of the first week of January. It was severe weather. The preceding warm month had swollen the buds somewhat, and made them less able to endure a cold no greater than 4° below cypher.

The Sixth Annual Meeting of the Breeders of Thoroughbred Neat Stock will be held at Worcester, Mass., on Wednesday, March 2d, at 10 A. M.

"Send for a Catalogue."

We cannot call particular attention to all the good things advertised in this number of the *Genesee Farmer*. We would cheerfully do so did our space permit. We would, however, urge our readers who wish to purchase trees, seeds, implements, machines, or any other article, to send to the parties who advertise in the *Farmer* for one of their catalogues. We believe you may deal with any of them with confidence.

We do not know how it is with others, but we should be at a loss how to get along without the catalogues of our leading nurserymen, seedsmen and agricultural implement makers. Such catalogues as those issued every year by Ellwanger & Barry, Frost & Co., C. W. Seelye, and other of our Rochester Nurserymen are invaluable. We should hardly know what vegetables to raise if it was not for the kind remembrance of our friends, Thornburn & Co., of New York, who each spring send us one of their valuable and *reliable* seed catalogues. Then if you want flowers—and who does not?—send to B. K. Bliss, of Springfield, Mass., or to James Vick, of this city, for one of their handsome illustrated catalogues Either of them are well worth half a dollar to any one who will study them, and yet they are sent free to all who enclose a stamp to pre-pay postage. The same may be said of other parties whose advertisement will be found in the *Farmer* this month.

Take our advice. Send for these catalogues, and when you have examined them forward your orders early, so that when spring opens you will be ready.

Cash, Book and Seed Premiums.

The press of advertisements this month is so great that we are compelled to omit our premium list. It will be found on the last page of the February number. We would again remind our friends that a copy of the *Rural Annual* for 1864, is sent to any one who gets up a club of six subscribers to the *Farmer*, at fifty cents each. For a club of eight we send a copy of Miner's Domestic Poultry Book. For a club of twelve, a copy of the Manual of Agriculture (a most excellent work). For a club of sixteen a dollar package of choice flower and vegetable seeds, *and* an extra copy of the *Farmer* and *Rural Annual*, for 1864. Larger premiums are offered for larger clubs.

The seeds will be ready in the course of a week or ten days, and if any who are entitled to them do not receive them promptly, we should *esteem it a favor* if they will inform us of the fact, when the seeds shall be sent at once.

A Last Word.

The time for competing for our Cash Prizes expires on the 15th of March. Our agents should send in all the names they can get, on or before that day. Many doubtless will take a prize that do not expect it. Our specific premiums are still continued. It is by no means too late to get subscribers. As we stereotype the *Farmer* the numbers from the commencement of the volume, will be sent to all who subscribe at this time. Send in the names!

Inquiries and Answers.

H. J. R., *Vernon, Iowa.*—1. Do not Pears do well grafted on thorns? 2. How many ashes is it good to put around young apple trees? 3. Are ashes good for Carrots? 4. What is the best way to grow grape vines from cuttings? 5. Can the Delaware cutting be grown the same as other grape cuttings?

1. No. They will grow for a few years, but never do well.

2. If the object is to prevent the attack of the borers, leached ashes should be used, and just enough to encircle the tree, immediately below the surface of the ground.

If the question is intended to refer to the use of ashes as a manure, we should say that a considerable quantity of leached ashes may be used without injury to the trees, but with what benefit must be determined by individual experience; we should not recommend them generally as a valuable manure for apple trees.

3. Do not know that they are.

4. Cuttings will do best if made and planted in the fall. When this is not done the cuttings should either be buried in the ground in a dry place, in such a way that they will be entirely covered with soil, or packed away in sand or soil in the cellar until spring, and then planted in a slanting position, so that the upper eye of the cuttings shall be at or just below the surface of the ground.

5. Yes.

Cranberries—(H. M., *Eden, N. Y.*)—Please to communicate to me and others, through the *Farmer*, whether cranberries can be grown by planting the seed, and if so, when, and how should they be planted?

The cranberry can be propagated readily by planting the seed, or crushed fruit in hills or drills, or sowing them broadcast and harrowing in. By this mode of propagating, however, a longer time will elapse before a crop of fruit can be gathered, than when the vines are planted. And, of course, much care and labor will be necessary to cultivate and keep the ground free from grass and weeds in the meantime. Another objection to growing from seed is, that a number of varieties will be produced, all of which are not equally productive, and the result will be smaller crops, than if the ground were uniformly planted with the most fruitful sort. Good plants can readily be procured, and at the rate of five dollars a thousand, and when a considerable quantity is wanted, probably for much less. It is suitable to plant them in hills, two or three plants in each, at a distance of two feet from hill to hill, and the rows about two and a half feet apart. About twenty-five thousand plants at this rate would be required to the acre. For marsh or swamp culture the Cherry variety is considered the best, and for upland culture the Bell variety.

I was much pleased with your notes in the August number of the *Genesee Farmer* for last year of a day's ramble in the wheat fields and among the farmers, giving a short description of the method pursued by several of the best farmers in Old Monroe. I wish we could have more of these notes. I was much interested in Mr. Sackett's success in raising lambs for the butcher. Will he be so kind as to give us a description, through the *Farmer*, of his method of keeping sheep, feeding &c. I doubt not it would be instructive to all the readers of the *Farmer* who are interested in sheep.—Chas. Ayer, *Lewiston, N. Y.*

On the 10th page of the *Rural Annual and Horticultural Directory*, for 1864, it says that *lime* will "destroy worms and the larvæ of insects." I have a garden that has been cultivated many years, and during the two last years, the ground was well stocked with worms. Some cut the beans off as soon as they came up, and, if perchance a poor bean survived this first onslaught, it was only to drag out a miserable existence on account of the constant gnawing which it received at the roots. What I desire to know is the *time* when the lime should be put on. Is it before plowing, after plowing, or after harrowing?—A. A. K.

It was doubtless the cut-worm that destroyed your beans. We do not know whether lime will destroy them. If you apply the lime this spring, let it be done as early as possible. Use it liberally, say at the rate of two bushels to the square rod, and dig or plow it under.

J. K. C., *Geneva, Wis.*—Some of the best varieties of pears ripening after the Flemish Beauty, are Sheldon, Urbaniste, Duchess d'Orleans, Beurre d'Anjou, Beurre Diel, Beurre d'Aremberg, Columbia, Doyenne d'Alencon, Glout Morceau, Josephine de Malines, Lawrence, Vicar of Winkfield, Winter Nelis.

P. G., *Eden Garden.*—A practical work on this subject is entitled *How to Build and Ventilate Hot House Graperies, &c., &c.,* by Robert B. Leuchars.

Please give me the address of men that make it their business of breeding horses, in the Western and Central part of your State. Is there any "Messenger's" stock in your part of the State? I wish to get some of that breed. Do you know where the Thoroughbred Stallion "Wild Irishman," is owned, or any of his colts?—A. P. Garfield, *Millbury, Mass.*

There is no one in my neighborhood that can raise any goosberries. They all mildew when about half-grown, and the bushes seem to be blighted on the top of the branches and grow no more for the season, consequently the bushes keep quite stunted. Can you give me any information respecting the treatment of them?—Benj. Armstrong.

At what stage of its growth should Herd's grass be cut for the hay to contain the most saccharine properties, and the best *modus operandi* to make it from the swath, taking the economy of labor into the account?—L. P. L., *Tioga county.*

Will timothy and clover "catch" good with flax? Who has tried it? Will they please communicate their experience through the *Genesee Farmer*?—John Scott, *Newfane, N. Y.*

Ticks on Sheep—Scab, &c.—In reply to the inquiry of "W. A. B." in the February number of the *Genesee Farmer*, Messrs. Lalor & Brothers, of Utica, N. Y., write us that their sheep-dipping composition, advertised in this number of the *Farmer*, is just the thing he wants. From what we hear of it we judge it to be an excellent article. Send for one of their circulars.

Valuable and Convenient.—"*Brown's Bronchial Troches*" are widely known as an admirable remedy for Bronchitis, Hoarseness, Coughs and other troubles of the throat and lungs. They are of great value for the purposes for which they are designed, and it should be known that while they are usually and pleasantly efficacious, they contain no hurtful ingredients, but may at all times be used with perfect safety.—*Boston Recorder.*

The Markets.

OFFICE OF THE GENESEE FARMER, February 26, 1864.

THERE has been little change in the price of grain since our last report. Beans are if anything a trifle lower in New York, but have advanced in the West. Butter continues very firm. The supply is small and it is thought that the present high rates will be maintained for some time. The range in New York is from 25 to 40c. according to quality. Eggs are lower, but still bring in New York from 25 to 30c. ℔ dozen. Poultry has advanced 3 to 5c. ℔ ℔. Turkeys bring from 15 to 18c., and choice 19 to 20c. ℔ ℔. Chickens 15@18c. Potatoes are unchanged. Cheese is full 1c. ℔ ℔. higher. Clover and Timothy Seed are higher. In this city $7.75 ℔ bushel is asked for Cloverseed. In New York it is quoted at 14¼@14½c. ℔ ℔., and Timothy at $3.20@3.50 ℔ bushel.

The English markets are dull and lower. The Germans have crossed the Elder and hostilities have actually commenced. The news caused Wheat to advance in Paris 12@50c. ℔ 100 kilos. Next to America, England looks to Northern Germany for her chief supply of grain, and a war in Holstein, if it goes no further, will materially interfere with the trade of the British ports and prevent England from obtaining the supplies necessary to finish the agricultural year. The last Mark-Lane Express says: "Come war or peace, the necessities of consumers will require about sixteen million quarters of Wheat (eighty million bushels) before next harvest; while war might put half as many sovereigns into grower's pockets without the public having to complain of the price of bread." There is every prospect of American farmers receiving very high prices for their products the coming autumn.

NEW YORK CATTLE MARKET.—Beef Cattle advanced last week in New York nearly 1c. ℔ ℔. Some prime holiday Cattle brought 16½c. ℔ ℔. for the carcass. The Tribune says some of the oldest Cattle Brokers express the opinion that beef was higher than they had ever before known. The highest markets during the last ten years were:

May 9, 1855	18½@15c. ℔ ℔.
May 16, 1855	12½@15c. ℔ ℔.
May 28, 1855	12½@14½c. ℔ ℔.
May 20, 1857	12—@14½c. ℔ ℔.
June 3, 1857	12—@14½c. ℔ ℔.

We are indebted to Mr. Solon Robinson, Agricultural Editor of the Tribune, for tables showing the weekly price of Cattle for the last ten years. It appears from these tables that, notwithstanding the general opinion to the contrary, Beef Cattle were not as high last year, on the average, as in 1855, 1856, and 1857. In 1854, the average estimated price was 9c. ℔ ℔.; 1855, 10c.; 1856, 9½c.; 1857, 10½c.; 1858, 8½c.; 1859, 9c.; 1860, 8c.; 1861, 7¾c.; 1862 7¾c.; 1863, 9¼c.

Mr. R. thinks the high price last week was caused mainly by speculation. He thinks there is no scarcity of Beef Cattle in the country and that the advance in prices the past week will call out a larger supply and prices will decline. [Since writing the above we learn by telegraph that Beef Cattle were full as high this week in New York as last. There was a fair supply of Beeves, but they were in the hands of speculators, and butchers were compelled to pay very high prices.]

There is little change in the price of Sheep. Mutton sells at wholesale in Washington Street Market at 7@9c. ℔ ℔. Pelts are dull at about $3.50 each. There is a large supply of Sheep in the country, but it is not improbable that we shall see high prices in March, as was the case last year. Butchers will now pay 8½c. ℔ ℔., live weight, for good fat Sheep, though the majority are sold at 7@8c.

Swine are very high—higher than for many years. The demand is largely in advance of the supply. Prices range from 8 to 9c. ℔ ℔., live weight, or from 10¾ to 11½c., dressed.

Milch Cows are in demand and prices have decidededly an upward tendency.

Special Notices.

Coe's Superphosphate of Lime.

DANVILLE, TP., SHIPTON, C. E., 1st Dec., 1863.

DEAR SIR: I was induced this spring to make a trial of your Superphosphate of Lime, and the results were, upon the whole, so very satisfactory, that I have thought well to inform you of the fact, in hope that it may encourage others to begin the use of it.

I experimented upon the following crops:—Potatoes, Mangold Wurzel, Carrots, Turnips, Tares, and Wheat.

I had two pieces of ground planted to Potatoes, one in my orchard, which had been well manured with barn-yard manure—plowed in—both this spring and the previous, and the Potatoes planted in hills three feet apart. These were planted a fortnight before the others, which were in the field, planted in drills thirty inches apart and twelve inches between each "sett." Those in the orchard were hand-hoed three times, those in the field once by hand and once by "horse-hoe." The field potatoes were manured in the drill, and Superphosphate, at the rate of a barrel and a half per acre, sprinkled upon it previous to its being covered, the potatoes (cut) being planted on the manure. These potatoes made their appearance above ground a week before the others, although two weeks later in being planted. They kept ahead of them all through the season, and were quite ripe at least three weeks before the others. There was scarcely any disease amongst them, whilst a good number of the orchard potatoes were affected. The exact results were not obtained, but I am safe in saying that those planted with Superphosphate produced a third more than the others. Both crops were excellent, and were at the rate of three hundred bushels to ...e acre (Imperial). With my Turnips the effects were even more striking. I planted them in drills, part with Su erphosphate and manure, part with best Peruvian Guano and manure, and part with manure alone. The Guano was obtained from C. L. Bartlett, Boston, and was good. The result was no perceptible difference between the turnips treated with Superphosphate and those treated with Guano, (the Guano was just double the price of the Superphosphate) whilst that treated with manure alone was not one-half so good as either. I did not weigh any of the turnips, but had them inspected by many gook judges who agree with this view of the case. The same quantity of Superphosphate and Guano was used—(about two barrels per acre)—and there was this remarkable feature in the case: the turnips treated with Guano were attacked with "rust," and ended by rotting to a considerable extent. Whether this was caused by the Guano or not I cannot tell. The others continued fresh and healthy until they were lifted. I shall use no more Guano. The effects upon the Carrots I cannot give, as they were too late in being planted, and proved nearly a failure. The Mangolds were good, but they too, were put in too late. The Tares were very much improved by the application of Superphosphate, but there was only a small piece of them. I consider it doubled the crop. I cannot speak with any certainty of its effects upon the Wheat, as the crop was nearly destroyed by wet during early summer.

I believe the experiment made upon my place has fully convinced numbers around of the great advantages to be derived from its use. I shall certainly continue to use it in future, probably more extensively than this spring. I used about twenty-two hundred pounds in all. I think the article had not the chance it might have had, if the land had been drained.

I hope that your enterprise in the manufacture of this article may meet with the success it deserves.

Your are at liberty to use this letter, or the contents, if you think proper.

I am, yours truly, G. THORBURN.

Sold by Andrew Coe, proprietor, 38 Francois Xavier street, Montreal; 8 Masonic Hall, Toronto, and by agents in all of the principal towns in Canada.

ADVERTISEMENTS.

A few short advertisements of interest to farmers—and only such—will be inserted in the GENESEE FARMER at twenty-five cents a line, or $2.50 per square, or $25 per column, each insertion, payable in advance.

THE GENESEE FARMER:

A MONTHLY JOURNAL OF AGRICULTURE AND HORTICULTURE.

Published at Rochester, N. Y., by

JOSEPH HARRIS.

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Owing to the premium on Canada money, we prepay the American postage on all papers sent to Canada without extra charge, when Canada money or stamps are sent. If American money is sent, 12 cents must be added to each subscription.

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JOSEPH HARRIS, Rochester, N. Y.

SALESMAN WANTED—Address Franklin Sewing Machine Co., Boston Mass. feb8t

FLOWER SEEDS—Delaware Grape Vines, Flowering Plants, &c., in variety, sent by mail. Catalogues gratis. Address H. B. LUM, Sandusky, Ohio. jan6t

PHILADELPHIA—Is the best *Hardy Raspberry*. FRENCH'S EARLY and RUSSELL'S PROLIFIC most valuable strawberries. For circulars address WILLIAM PARRY, Cinnaminson, N. J. jan6t

TREES AND PLANTS OF ALL KINDS—Deciduous and Evergreen; Fruit and Ornamental in all sizes, at low rates. Purchasers should send for new Priced List for 1864, before purchasing elsewhere. Carriage paid to Boston, Newport, and New York. B. M. WATSON, feb8t Old Colony Nurseries, Plymouth, Mass.

TO AGENTS AND DEALERS IN TREES AND TO CLUBS.—My Wholesale Catalogue for 1864 is now ready. Carriage of packages paid to Boston, Newport and New York. B. M. WATSON, feb2t Old Colony Nurseries, Plymouth, Mass.

White or Hedge Willow for Sale.

CUTTINGS of this superior live fence plant, of suitable length, at $1 per 100 or $5 per 1000. Warranted true SALIX ALBA. mh D. S. HEFFRON, Utica, N. Y.

Bartlett's Ditching and Subsoil Plow.

THE BEST AND CHEAPEST IN USE—Adjustable to different widths for either stone or tile. Price, $25. State, County and Town Rights for sale. Address mh1t* A. J. BARTLETT, Kendaia, Seneca co., N. Y.

CHEAP APPLE TREES.

ABOUT 30,000 first class 4-year old Apple Trees will be sold very cheap to clear the grounds. Also, bearing vines of the Isabella, Hartford Prolific and Concord. mh2t A. M. WILLIAMS, Syracuse, N. Y.

Brown's Bronchial Troches.

These Lozengers are prepared from a highly esteemed recipe for alleviating BRONCHIAL AFFECTIONS, ASTHMA, HOARSENESS, COUGHS, COLDS, and Irritation or soreness of the Throat.

Public Speakers and Vocalists

Will find them beneficial in clearing the voice before speaking or singing, and relieving the throat after any unusual exertion of the vocal organs, having a peculiar adaptation to affections which disturb the organs of speech.

Orinoco Tobacco Seed.

NEW SEED of this valuable early variety at 25 cents per packet, or 50 cents per ounce. Less per pound. Also new Seed of the

Connecticut Seed Leaf

at the same prices.

Both kinds of my own growing, and warranted genuine. Circulars, giving brief directions for PLANTING and CULTIVATION, sent free to all purchasers. mh D. S. HEFFRON, Utica, N. Y.

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OUR NEW POCKET ALBUM.

[FOR SOLDIER AND CIVILIAN.]

Holding Sixteen pictures, is the cheapest and best Pocket Album ever offered to the public.

Sent by Mail to any address, post paid, on receipt of Seventy-five cents.

It can be filled with Pictures (16) and sent by mail to soldiers in the army, or friends anywhere in Uncle Sam's dominions, at the very trifling sum of Thirty Cents postage. Orders promptly filled by SAMUEL BOWLES & COMPANY, Photograph Album Manufacturers, mh1t SPRINGFIELD, MASS.

RUSSELL'S STRAWBERRY.

RUSSELL'S GREAT PROLIFIC STRAWBERRY.—This new Strawberry is undoubtedly the best Strawberry yet known, being the largest and most prolific bearer, many of the berries measuring five to six inches in circumference. We can furnish good genuine plants, well packed, the coming spring for $2 per dozen or $10 per 100, cash to accompany orders.

Also for sale, Fruit and Ornamental Trees, Grape Vines, Greenhouse and Bedding Plants. Address W. T. & E. SMITH, mh Geneva Nursery, Geneva, N. Y.

Connecticut Seed Leaf Tobacco Seed.

BE SURE AND GET THE BEST.

THE SUBSCRIBER offers for sale a very clean lot of the above, raised expressly for him by one of the most successful cultivators in the Valley of the Connecticut. Packets containing ONE OUNCE, with FULL DIRECTIONS FOR CULTURE will be mailed postpaid to any address in the Union upon receipt of 50 cents. Prices for larger quantities will be given upon application. Address B. K. BLISS, mh2t Springfield, Mass.

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A SUPPLY of the genuine article just received by the subscriber, and will be mailed postpaid to any address upon receipt of the price. Packets containing 1 ounce, 15 cents; 8 ounces, 60 cents; 1 pound $1.

Directions for culture accompany each package.

mh2t B. K. BLISS, Springfield, Mass.

AYRSHIRE CATTLE FOR SALE.

THE subscriber will sell from his Herd of AYRSHIRES, numbering ninety head, chiefly imported or bred by himself, several Males and Females of the best blood and points. For particulars send for Catalogue. HENRY H. PETERS, mh2t Southborough, Mass.

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40,000 APPLE TREES five years old and of the most approved varieties, for sale at a LOW PRICE in lots of 1000 and upwards. The whole will be sold on favorable terms, or exchanged for other property. For particulars address mh2t DR. MALTBY STRONG, Rochester, N. Y.

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CAN BE CURED.

ALL PERSONS owning Horses afflicted with this disease will be greatly benefited by addressing C. B. HART, mh1t* P. O. Box 80, Victor, N. Y.

TOBACCO SEED.

FOR the benefit of those that wish to commence the culture of Tobacco, I will send GOOD seed for 15 cents per packet. mh2t JULIUS RISING, Southwick, Mass.

FLOWER SEEDS.

MY DESCRIPTIVE CATALOGUE of Flowers and How to Raise Them, will be sent to all stamp applicants. mh1t* MARK D. WILLSON, Rochester, N. Y.

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A LARGE STOCK of good vines of Concord, Maxetawney and other varieties offered at reduced prices by mh1t MAHLON MOON, Morrisville, Bucks co., Pa.

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A GOOD FARM of 110 acres, near the village of Van Etten in Chemung county, N. Y., 14 miles from Havanna. It is good land, but as I can not attend to it myself, I will sell it for $25 per acre. Only *one-third* of the purchase money need be paid down. The remainder can lie any length of time that is desired. JOSEPH HARRIS, Rochester, N. Y.

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FORTY ACRES OF WOOD-LAND—Heavily timbered, near Wyandotte, a few miles from Detroit, Mich. Will be sold cheap. JOSEPH HARRIS, Rochester, N. Y.

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ALSO,

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CONNECTICUT SEED LEAF TOBACCO, the true Broad Leaf Variety, per pound $4, per ounce, 30 cents.
GENUINE HAVANA TOBACCO, per pound $6, per ounce 50 cents.
WHITE JAPAN MELON, per packet 10 cents, per ounce 50 cents.
EARLY PARIS CAULIFLOWER, per ounce $1.
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NEW VALENCIA CLUSTER TOMATO, per oz. 40 cents.
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ALSO,

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2 years old, very strong,		No. 1,		$5 00
2	do.	strong,	No. 2,	4 00
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All cut back to 3 to 4 eyes.

A discount of 30 per cent. to dealers on bills of $50 and over. The above prices and terms of discount will be strictly adhered to.

NO INFERIOR vines will be sent out by me. Purchasers can rely on the quality of my vines being unsurpassed.

Will be forwarded in sealed boxes by express. No charge for boxes. Or small orders will be securely packed and sent by mail prepaid, when so ordered.

The two great Grape Exhibitions held last autumn at New York and Cleveland, awarded to the Adirondac THE PRIZE FOR THE

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Quality to Rule.

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THERE IS A GOOD ORCHARD

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WE have an extra quantity of very well grown
APPLES,
DWARF PEARS,
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ORANGE AND
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Also a quantity of
GRAPES,
GOOSEBERRIES,
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EVERGREENS of various sizes, several times replanted, and HARDY ORNAMENTAL SHRUBS. All of which will be sold at low prices.

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Cabbage, Early York and large York,	15 cts.
Cauliflower, Early Paris, the best known,	$1 25
Cucumber, Extra Early Russian and White Spine,	20 "
Egg Plant, Improved Large Purple,	50 "
Lettuce, Early Silesian, and Boston Curled,	20 "
Raddish, Early Scarlet, and Olive Shaped,	10 "
Tomato, Extra Early Red and Early Apple,	20 "
	per packet.
Tomato, Lester's perfected, extra fine,	10 cts.
Tomato, New Erect French, grows in the form of a bush, fine flavored, very ornamental,	10 "
English and German Prize Cucumbers, in great variety, fine for forcing,	25 "

A Descriptive Catalogue of Vegetable and Flower Seeds furnished to all applicants upon receipt of a three-cent stamp.

Address B. K. BLISS,

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DUCKS, FOWLS AND GEESE.

WE are now prepared to furnish White-face Spanish, Golden Crested, Silver Spangled Hamburgs, Black-breasted Red Game, Gray Dorking, Brahma, Cochin, Creeper and Dominique fowls. Rose-comb African, Silver Pencilled, and Golden Spangled Bantams. Rouen, Cayuga Black and Aylesbury Ducks. Bremen Geese.

mh1t C. N. BEMENT, Poughkeepsie, N. Y.

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DIPPING COMPOSITION.

CURES SCAB, TICKS and LICE on SHEEP or CATTLE—adds over a pound of wool to the fleece, improves its quality, and adds to the general health of the sheep, without danger from taking cold.

For particulars apply to

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50,000 Basket Osier Cuttings at $1.50 per 1000.
10,000 Scotch Elm, 2 years old, 1 to 2 feet, strong plants, $5.00 per 1000.
5,000 Norway Spruce, 3 years old, transplanted, $3.00 per 100, $20 per 1000.
2,000 Concord Grape Vines, 1 year old, strong and well-rooted, $10 per 100.
White Grape Currants, 2 years old, $5.00 per 100.
Cherry Currant, 1 year old, strong, $5.00 per 100.

JOSEPH CALDWELL,

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COLLECTION KITCHEN GARDEN SEEDS.

BY MAIL POSTPAID.

20 varieties, our selection, ... $1.00
45 varieties, our selection, ... 2.00

THE above collections embrace all the leading varieties of Vegetable Seeds usually grown in our gardens. To those who desire larger quantities, we would recommend our collections at $20, $15, $10, $5 and $3—suitable for large or small gardens, which can be safely forwarded by express to all parts of the country. A list of the contents of each collection, with directions for culture, will be found in our NEW DESCRIPTIVE CULTURAL CATALOGUE, which will be mailed to all applicants upon receipt of two three-cent stamps. Address

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